NOTICE OF PUBLIC INFORMATIONAL MEETING

IN RE NORDIC AQUAFARMS, INC.

Public Meeting At The Hutchinson Center

Reported by Robin J. Dostie, a Notary Public and court reporter in and for the State of Maine, on March 26, 2019, at the Hutchinson Center, 80 Belmont Avenue, Belfast, Maine, commencing at 6:00 p.m.

LEE WOODWARD, ESQ. - MODERATOR

REPRESENTING NORDIC AQUAFARMS, INC.
ERIK HEIM, NORDIC AQUAFARMS
ED COTTER, NORDIC AQUAFARMS
ELIZABETH RANSOM, RANSOM CONSULTING
MARK JOHNSON, SMRT
DAVID NOYES, NORDIC AQUAFARMS
MAUREEN MCGLONE, RANSOM CONSULTING
MIKE MOBILE, MCDONALD MORRISSEY ASSOCIATES

MR. WOODWARD: Welcome, I would say everyone take their seat, but that's kind of physically impossible. My name is Lee Woodward. I've agreed to act as the moderator here, which means I'll be working for about the first two minutes and then watching the presentation for two hours and then there will be a question and answer period when we will try to get as many intelligent questions asked as possible. We're going to have approximately one hour at the end for that and I think the way we'll measure the success of the meeting from that point of view is both the quality of the questions and the quality of the answers.

This is part of a rather extensive public process. Nordic in going forward with this project is going to have to seek permits at three different levels; federal, local and state. What you have here today is the public information meeting, which is required before they file four state permits dealing with site location, Natural Resources Protection Act, air emissions and pollution discharge. It's kind of counter intuitive that they have to have the public meeting before they even file their applications, but that's what state law requires.

When it comes to the format of the meeting,

Nordic will be presenting information on all four of the permit applications they will be submitting. There is a court reporter here and both during the two hour presentation and during the question and answer period, it's important that everyone before they speak recites their name and also that you speak into a microphone. During the presentation, I'm going to be sitting over as near to the court reporter as I can and I'm going to figure that if I can't hear what's going on, she cannot hear what's going on and I'll signal to whoever is speaking to come to the microphone and to announce their name and to do it as loudly as possible.

So without any further adieu, I'll have Erik come forward.

MR. HEIM: Good evening. Thank you all for coming and spending your evening with us. I believe we have a lot of good information to share tonight. It's been quite a journey also for me personally. I remember I was three years old when I caught my first fish and I was scared to death. And, in fact, over the years I have normalized sort of my relationship to fish also and in the end that's part of the reason why we are here today.

So this company, I'm going to just recap a

little bit about the background for why we are here because there may be new people who have not attended our meetings before. Part of the reason we are here is that we live in a world with rapid change all around us and also a growing population and we have major environmental challenges to confront and they affect our food systems and will for decades to come. And our company has been founded to address some of these issues in the future, it's not the only solution, but it's a part of the solution and that's why we'll also be seeing across the U.S. a rapidly growing interest for the potential of the type of production we are working on.

So I am going to just see if -- do we have a pointer or the laser because we slip -- we are skipping some slides here. Okay. We are a pure-play land-based producer. What you're seeing here is actually our latest facility now finished in Norway. This has been funded in part by grants from the EU and Norwegian government, environmental grants, and this is the third project we've done. This will be the fourth.

I want to recap a little bit what this is all about. We have previously presented our discharge applications showing how we have gone

further down the industry in terms of treating for nutrients and discharge and so on. The systems we are having developing over years and are looking to propose here in Maine is a new generation of food systems and also ocean protection standards when you look at the value of treatment that we are introducing into this industry. And it's interesting to look at the U.S. as the single largest consumption market in the Western World of salmon, which we are looking at here. A 30-acre footprint will produce 7 percent of U.S. consumption in a multi-stage development project. That tells you something about the potential in the U.S. and the future also to develop food systems on low carbon footprints. It's also interesting to see that we are connecting our European and U.S. interests. We are working -- we have had a very good relationship with UNE. We are developing one with UMaine. There is connections to academic institutions in the Nordics as well and I see a lot of interesting potential for institutions also to connect as a consequence of what's happening.

We have been consistently promoting Maine as a seafood state because we believe in Maine and the potential in the state. And we are also working with many initiatives to protect the environment and wild

salmon populations. That's also why, for example, the Atlantic Salmon Federation is supporting this project. We are trying to do good in the communities we work in as we do in Europe. We are working to conserve lands here in town. We are working with the lobster industry to provide bait and also we've been working with various community support projects.

What is land-based production? Just a few words about that in case not everybody knows that. Everything is happening indoors, so from egg to harvest size fish is all indoors in one site and that gives complete traceability. I read an article lately that up to 30 percent of the fish being served in North America can actually end up being a different product than what's on the menu. So traceability is going to be increasingly important in the future for this country and also other countries in terms of knowing what we are actually eating and where it's from and its full history.

Ideal conditions for fish. What we are doing is we are basically enclosing these fish in barriers of water coming in, so we're removing parasites, pathogens, so we are protecting the fish from this. This has been a major challenge for the fish farming industry so far and now new solutions

are coming on the table. We are also introducing a new industry standard for nutrient discharge. We have already done this in Europe and we're taking it further here. And this was a part of our application where we had two meetings last fall presenting that information. We will recap that today as well.

What we are doing with this project is we're recapturing and recycling and creating new business opportunities from waste resources. What we're doing -- proposing to do with the lobster industry is one example and there are many other examples also. And that also shows as additional farms or companies are looking at operations like this in Maine we will see more opportunities for businesses to emerge downstream from this kind of industry. We have no commingling with live species in these systems. They're all in the tank systems. We have a significantly lower Co2 footprint than the several hundred thousand metric tons of salmon being airfreighted into the U.S. today. And as we said many times, our production does not use GMO, no growth hormones and antibiotics and so on in our daily productions. These are key points that are important to impress.

We have served our fish a number of times in

the U.S. as recently as Boston last week at the Seafood Expo there. We have been up at Sunday River's Resort and served a crowd of 250 people and also in Portland in an arrangement down there. And last we had the pleasure of serving our fish to Janet Mills, the Governor. So we've been busy.

Let's see. Just about -- shortly about the permit applications for Belfast. This is a rigorous process. We permitted in Denmark and Norway before. This is the third country we've done it in and we also learned all of the requirements there. And as our applications show, we have gone above and beyond many of the requirements here in Maine in terms of the environmental requirements. And a process like this is extensive, months and months of data collection, engineering and integrations to optimize and always try to seek the best solutions on any given site that we work on, in this case Belfast. So we have solved many, many challenges along the way to make sure that this project works for this community. And we have taken in large amounts of input along the way and some of it has been very constructive. And it's like this -- a project like this always leads to many adjustments along the way, but we had our guiding stars to be true to our commitment in terms

of setting environmental standards for this industry and our documentation will also show that. And this is also been recognized by a number of leading environmental organizations in Maine who we subjected our applications to peer reviews; among those, Conservation Law Foundation, the Atlantic Salmon Federation and the Resource Institute of Maine, GMRI in Portland.

This is our U.S. team as we are here. We have as of today six U.S. employees, one Norwegian and sort of a mix of the two. We also have an Irish gentleman moving into the area this summer. And so this is the organization that we have invested in and built up in Maine before we have permits. And this is just showing our commitment to doing economic development in Maine. Also of interest may be that we have behind us a world class engineering team. They have built facilities for Grieg Seafood, Marine Harvest, Cooke, all over the word. We have a total of 14 specialized engineers behind this effort here in Maine. Some of them are shown here. And a part of this team is also the U.S. employees were Ed Cotter, John Hessler, again, David Noyes have been the people driving the engineering effort with local vendors here in Maine. And you see some of their

names here of the vendors here, well-known vendors in Maine, solid companies.

So undertaking engineering for a 30-acre footprint is a large effort and engineering drafts for the applications are now complete and today we are presenting the final details of our proposal and taking questions also from all of you. So, again, thank you for coming. And I'm going to leave this now to the next person in line.

(Applause.)

MR. COTTER: Thank you, Erik. Thank you everybody for being here. It's a pleasure to see such a great turnout. I know that there is obviously a lot of interest in the information and the best thing we can do is to present what you're going to see in the applications so that we can give you a chance for questions now, we can be clear, and anything that isn't clear enough we have an opportunity to clarify and to improve in our application so that when you see it you'll have good solid information that you have seen before and that you'll be able to follow along.

Just a quick review of the timetable of this project, both how we've gotten here and where we're going to be going from here. So we've been going on

this for, as Erik might have mentioned, over a year now. Now, we're to the point where we are in the midst of our permitting and engineering effort. Even though we are now ready to submit our permits it's really just the, you know, the mid-point of that process. We expect there will be a lot more review, a lot more questions and more public input opportunities through that. We'll also continue through our engineering. We're not done with that yet. We're going to be getting to final design details. We've got to meet with the city planning and that public input process, so there is still more work to do. Finally, as you see here the start of the construction right now we anticipate to be end of second quarter, beginning of third quarter 2019. So that's the beginning of site work as we see the schedule right now.

I'll give you a quick run down on the project layout. What we've got here is a very compact design. Although the site does seem like a large site considering the amount of output and product that we're able to develop on this site it is extremely efficient and compact. The site that you'll see that I'll go through in more detail minimizes impacts to the public and through --

through significant buffers and visual buffers as well as requirements and other code compliant site selection and site layout. Architectural details are still in progress as I mentioned. What we have here is a site layout design, which is required for the state at this point. The architectural details that are being developed will be submitted shortly through the city planning board and you'll see those coming up shortly.

So the project layout, I just want to go through the buildings really quickly. We've got here nine buildings, 10 buildings including the gate house. So Building 1 and 2 are the largest buildings on this footprint. Those are the modules, the production modules that we call them, and you can see those at the top here on the northern end of the site and the southern end of the site. Those are our production modules. In the middle of the building -- in the middle of the site is our smolt building. This is our hatchery and our pre-smolt stage where the first life stages of the fish are before they're transported to the production modules. That's Building 3 is Phase 1. Sorry, 3 is Phase 1 and 2 together. Building 4 is fish processing. That's where we process our final product and ship it out to

our local vendors. Building 5, central utility utilities plant includes back-up generation, chillers, boilers for the building and our electrical systems. Building 6 is our oxygen generation -- building might be a little bit of a misnomer, it's really a series of oxygen generation facilities and tanks. Building 7 is our office and administration building. We'll get into that a little bit more. That's going to be right in front of Building 1. And then Building 8 is our water treatment plant. That's the closest building to Route 1 down near the entrance to the site. And you'll see more of these buildings both renderings and details on the following slides. Finally, Building 9 is a small gate house. And Building 10 is the existing Belfast Water District building, which is going to be renovated and used as an information space and public space.

This is the rendering that's created of the most recent design. You see it very closely resembles the layout that I just showed you and what you can see here is what we call the 3+1 modular design. This is based on engineering efforts in Norway and Denmark that have been tried and we're looking at process improvement at all times. What

we've got is our smolt units are designed and maximized for the modules that we're going to be building. The smolts are sized to produce enough fish for three grow-out modules and that's why the 3+1. The three modules maximizes efficiencies and maximizes the output of those smolt units and maximizes the investment in the infrastructure as well.

On the site -- we've got a 54-acre site. Included in that is our regulatory required 40 foot vegetated buffers and 50 foot zoning setbacks. What you'll see in the design is that we have not only met those in all cases but also exceeded them in almost every case. Our minimum setback -- building setback is 100 feet from the property line, which means that on the Little River side between the 250 foot shoreland zone buffer that's being transferred to the city and deeded to the city for protection, we also have another 100 feet, so 350 feet minimum to the building from the river. It's also important to note that the vegetative buffer that is there is going to be left in tact where possible. At all times it will be replanted where needed because of impacts and we'll also supplement what's there. If there is an area that's got gaps in it we'll supplement that with

future plantings to maximize that buffer.

Project phasing I want to talk about because of the importance to soil erosion during construction. Our soil -- sorry. Our construction phasing plan has been designed to minimize areas of disturbed soil. We know that we have a lot of silty soils in the area, so what we're going to be doing is impacting only areas that we're ready to protect and build on and leaving all other areas that are not ready for construction with vegetation and other stabilization measures so that we don't create a situation where there is over -- an excessive amount of silt and soils to protect. We're going to defer removal of vegetation as long as possible and we've also got multiple layers of soil erosion sediment control protections. We're not just relying on a silt fence and a couple of hay bales. We're going to have a tool box of other items including retention basins and other tools at our disposal as-needed to make sure that erosion is not a problem. Finally, we'll have a third-party soil erosion control monitor that will report to the DEP on a regular basis.

The first couple building blocks of the project is the smolt building. Smolt 1 is our Phase 1 smolt building. We're going to excavate that out.

You see that magenta/purple line really represent what's being opened up at this time. Only Smolt 1 at this phase is under construction and that's really all that's being disturbed as well as roads in and out. Other areas we're going to keep vegetated.

Then as we move along, Smolt 1 foundation gets built. We no longer have a soil erosion problem there. We'll move into the support building area where we'll open that area up, provide more soil erosion around it and start building there. All areas of open excavation once it's -- once we're done with the excavation we're going to treat the areas with gravel to make sure that we have a stable pad.

And then we expand the site in further phases. Once the foundation for smolt and support buildings are started we get into the modules. Module 1 on the Building 1 is our first expansion of the site. We'll then again expand the soil erosion control measures and start digging out the unsuitable soils bringing in structural fill and build Module 1 and then move on to Module 2 and 3 as Phase 1 continues.

Again, it's important to maintain soil erosion sediment control measures along the perimeter as well as the interior ones and then once the

buildings are brought into production and the production staff occupies the buildings, we'll remove those soil erosion control measures only once final finishes and stabilization are in place.

Phase 2 starts only once Phase 1 is fully completed with the modules in Building 1 and then we'll expand the site at that point. And at that time, Phase 1 will be completed and all of the finishes and stabilization material will be in place. And then, again, we just move along Building 2, going through Module 4, 5 and 6 and then install final site finishes.

So we're talking about the seawater intake pipe. Most people in the room have seen this now. What you see is our final determination as far as having all of the proper TRI and engineering completed. It was obviously a very complicated process with a lot of complex and legal and engineering issues to be considered. What you see here is the shortest route that's available to us. This minimizes construction impacts and what we've determined is that any additional length in pipe just does not provide any environmental gain. The discharge point that you see represented here at the -- right at the peak of the bend there represents

the discharge point that's been consistent throughout the project. This is what everybody saw in the October 2018 DEP submission. We have not changed that discharge point. Final permit applications will address all of the DEP requests for information that were provided to us in January. We have met with DEP and explained our responses to those. They understand that those will be provided officially through our final submission in a couple weeks.

Pipe installation details. The first point I just want to mention here is that the top slide shows the installation method on the upland intertidal and shallow waters of the surf zone. The key part here is that, as you can see, the depth varies depending on where we are. This pipe will always be buried. I know some people were concerned that they might see the pipe sitting on the intertidal. That won't be the case. We will bury the pipe. And the only time that the pipe submerges from the -- from underground will be in approximately 35 feet of water and at that point we'll switch over to the bottom detail, which is where we lay the pipe on the seabed and protect it with a series of rip rap and other protections and to weigh it down from storm waves and currents. Coastal work out on the water to

be completed during regulatory time frame so the Army Corps of Engineers selects November through April as the time for this kind of work to minimize the environmental impacts and that's the window we will be using. And then upland we're going to be using the time frame to integrate with our construction schedule but also looking at traffic impacts and making sure that we have minimal impacts and mitigate all impacts on traffic crossing Route 1. It's not in this slide, but you'll see in the application that we are rerouting traffic and maintaining the full traffic route so that there won't be big traffic problems in that area.

Finally, the pipe installation at the termination of the pipes. We've got the intake structure. We've got two intake pipes, 30 inch pipes and both of those will have this assembly that you see here, which is provided to mitigate impingement risks. We're going to maximize the surface area and reduce the velocity of the flow there. And then down at the bottom you see the discharge pipe with baffles, which are designed to improve the diffusion of the effluent coming out of those pipes.

So that's the construction methodology and phasing. I'm going to pass it over to SMRT for

visual impacts. Thank you.

(Applause.)

MR. JOHNSON: Good evening. Thank you, Ed. My name is Mark Johnson. I'm with SMRT architects and engineers. We're based in Portland. I am a landscape architect and I have been practicing in Maine since 1986, so I've had the pleasure of doing products throughout the state in my time here. My role on this project has been multifaceted. I've been involved with site planning and design throughout and what I'd like to speak to you tonight about is my role with the visual impact assessment for the project.

The diagram -- well, let me first start by saying I want to outline what the actual purpose of a visual impact assessment is relative to this process, the methodology that is used for such an assessment and our findings of course. Per state law, and as you know, we are submitting for Site Location of Development Act with the state as well as Natural Resource Protection Act and those are the two arenas within with I am working primarily. Chapter 315 of state law mandates that we perform an assessment to evaluate whether a new facility will have an unreasonable adverse effect on existing uses and

scenic character and specifically whether it will be unreasonably interfere with views from established public viewing areas, again, in accordance with Chapter 315 Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Uses.

Well, what does that really mean? The chapter goes on to define a scenic resource as public natural resources or public land visited by the general public in part for the use, observation, enjoyment and appreciation of natural or cultural visual qualities. The attributes, characteristics and features of the landscape of a scenic resource provide varying responses from and varying degrees of benefits to humans.

So what we -- what we had to do and in getting into the methodology is to first canvas the area, assess the area surrounding the site to determine even if these public resources exist. And we have to be careful about the definition here because the public resource that I just defined is different from a place from which you can actually view the project and I'll get into that distinction here in a minute. So what we had to do -- and hopefully can I kind of beam over here. This is the project site and Route 1 is right along here.

Perkins Road is around here. This is the Belfast Reservoir Number 1 of the water district. So what we did was to traverse that area to determine where potentially the project could be seen. And indeed we all know that the McLellan-Poor Preserve over in Northport exists on the south side of the reservoir and the Little River Community Trail on now city land lies on the north shore. We know that these are public resources. We also know that the views are potential from Route 1 looking across below the church here and from Perkins Road.

What we do then is take digital images from these -- from these locations, digital camera like many of you have with a, quote, unquote, normal lens, 50 millimeter or so, to establish a -- what would be viewed as a normal -- a normal view. We did these two times back last fall with leaf-on and in January with leaf-off to simulate a worst case condition. Computer models of the -- of the buildings were generated using building information modeling software including Auto CAD, Revit, et cetera, to create models of the buildings, place them in relation to proposed topography, calibrate viewpoints for our visual simulations and generate views. These views from that software were then integrated into

the photographic representation from the various viewpoints using Photoshop and the like to create what's known as a photo montage mixing that model with what is viewed out in the landscape.

As a check, we took weather balloons, 5 1/2 foot diameter weather balloons and floated them at these four corners of Building 1. Why just those four corners? Well, we know that that's in an open cleared area existing already and so if -- if the building is going to be seen it's going to be seen there and -- number one; and number two, what those allowed us to do was to create a data in the landscape. Those locations were surveyed by a surveyor. We set the balloons to the projected height of the building and then used that to coordinate our imagery. What you see here is an existing view. This is a before view from the existing Belfast Water District entrance. This will show where the bidding will be and then this is the modeling. Now, you can see here the lines of the building beyond, these are the grow modules beyond, this is the waste water treatment plant. We are necessarily showing basic boxes for the buildings at this point. They are -- they are based on the general footprints that are shown for the buildings

and the allowable heights.

This is shown from Route 1 below the church. You can see the Matthew's Brothers Plant up here. This line here shows the elevation of the balloons and that line was calibrated right to them. This is a view in there and you can see how this is setting within the context of existing trees. This is from Perkins Road, again, before shot. This is on the east end. You can see the level of the balloons and the level of the building is relative to that.

As we move west on the site, we're up and in a denser break of trees here. And we also have grade advantage too so the building is essentially settling down into the landscape there and you can see the line beyond. This gives you an indication from the community trail of the density of vegetation in between user of the trail. And the this was done -- we had a safety yellow vest that we hung about 100 feet up from the trail here and you can barely -- barely see that.

So just to wrap up, the conclusions are, number one, the proposed development, number one, meets city requirements for space in bulk. The city land, the Belfast reservoir land, the 250 feet, provides a minimum of 250 feet of vegetated buffer

between the public viewing sources and indeed because of city requirements of a 40 foot undisturbed buffer within the property we have at a minimum 290 feet of existing vegetation between a potential trail user and the development. The views past 100 feet, again, are extremely dense and will be -- it will be all but occluded. So the conclusion is -- is that indeed there would be no unreasonable adverse effect to public viewing sources. And with that, we have Alternatives Analysis. Thank you.

(Applause.)

MS. RANSOM: Good evening. My name is Elizabeth Ransom with Ransom Consulting. Many of you have been in this room listening to me previously. I've presented at a number of the other Nordic Aquafarms meetings -- public meetings we've had. As you've heard from the previous speakers, we are speaking about several applications tonight and I'm going to take a little bit of a step backwards and just run through a little bit of what those applications are.

The first application we are going to be speaking about is -- quite extensively is the site law or Site Location of Development Act, sometimes abbreviated SLODA application. And just to give you

an idea there are between 25 and 30 sections to the SLODA application and obviously we're trying to give you the most information we can in a two hour meeting about those sections, so we've tried to highlight a lot of the ones that we think are, A, integral to that application or, B, things that we think the community is going to have a lot of interest in. In addition, we're trying to present information to you about National Resources Protection Act or NRPA. And the alternatives analysis that I'm going to start with is a big component of the NRPA application. In addition, we're go to touch briefly on the air permitting and also just quick refresher on the MEPDES or discharge permitting that we've presented in previous meetings.

So with that, so what exactly is an Alternatives Analysis? Well, an Alternatives Analysis is a document that the applicant has to put together to state his proposal because remember at this point in time we're talking about a proposal. It's not an actual project until that application has been finalized and approved by the appropriate agencies. So in this proposal and in our Alternatives Analysis the project applicant has to analyze whether or not there is a practicable

alternative that can meet their project purpose, and we'll talk in a minute about what that project purpose is, but we have to define whether or not we could have done this by either utilizing or expanding on or managing some other site that would avoid the impacts to wetlands; whether it is way to reduce or change the project density as we propose and therefore reduce our impacts to wetlands; and is there some other sort of design we could have considered that would still meet our project purpose but avoid or lessen the impacts to wetlands; and then also we obviously need to define, you know, do we really need this project and why do we have to do the proposed alterations to the land.

So what is Nordic's project purpose? Why are we here? I think you've been hearing pretty consistently the message that we're here because there is a strong need for safe, high quality, traceable and sustainable seafood. We can accomplish that goal with a lower carbon footprint if we do it here in the U.S. versus shipping it from overseas. By doing it here, we can improve our traceability, we can understand what's going into the fish, we can understand the genetic origin of those fish and we have better control of the environmental impacts of

the growing of those fish and what we put in ourselves when we eat them. So this facility's project purpose is to provide up to 7 percent of the U.S. salmon consumption from a single and grow 33,000 metric tons of fish and to provide that to consumers within a day's drive of the facility and serve the northeast markets. And in order to do that, we need certain things like the clean, clear seawater and fresh water that we have in the Belfast area and a number of other criteria that we'll be talking about later.

As a part of our Alternatives Analysis we also go in and define what the project benefits are, what are we bringing along with this project besides seafood and in this case it's the direct creation of over 100 jobs as well as the ancillary industries. Erik spoke about it earlier some of the things that will come up from the additional products that will be produced besides fish including things like lobster bait and other things from our cuttings. There is work force development opportunities with some of the Maine universities. There is a $500 million investment in the local Maine economy. There will be long-term, non-residential tax revenue in the City of Belfast and a significant cash influx to the

Belfast Water District from the purchase of their land to be used for infrastructure developments. And obviously there is the safe, high quality seafood that will improve U.S. food security and, you know, promote a lower environmental footprint from the fish we're consuming. And obviously I already mentioned that there is the potential for a lot of these salmon cuttings to be used as lobster bait, which most people in this room probably are aware is a real need in the State of Maine.

So how do we evaluate the criteria for the projects and what are we doing when we do that? Well, the state establishes basically four large criteria by which all projects are evaluated and then within that we break it into subcategories to look at those things in more details. So the first one is, you know, can we meet site requirements. Do we have the legal title, right and interest to acquire the land or the rights to the land or the rights to the development? Can we do it in a way that meets existing zoning or existing fire code? So what are some of these siting requirements and legal requirements and can we meet those for our project in the location we're looking at?

Another big one is what are the

environmental impacts and are they reasonable impacts? So in that we evaluate what are the wetlands? What are the streams? What is the use of ground water and surface water? A third criteria or group of criteria is about the engineering feasibility of the proposed project. So that includes not only can we build it, but also can we operate it. So we look at things like what are the geotechnical considerations of the site? Can we put our layout and design in a way that's functional? You know, if you're building -- if you're building furniture you're not going to build half the chair in a building on one side of the site and then truck it across town to build the rest of the chair. It's the same way with growing fish. We need to find a place where we can actually have the logistics and operations work out for our facility as well. And lastly, one of the criteria that the state has that we can evaluate projects on is what's the financial impact of that alternative. So does a proposed project have the capacity to absorb that financial impact of a particular decision and still move forward.

So what are the different things that we looked at in the Alternatives Analysis? For a

complex project like this we felt it was necessary to break things down into sort of three different key analyses. One is on-site selection. Why are we here? Why did we choose Belfast? The other piece is site layout. Is there a different way of looking at the site layout that would perhaps be less impact? How many buildings do we need? What are those buildings and how do we arrange them on the available site? And then the third thing was the piping layout. You know, how do we access seawater? There is obviously a lot of different ways you can get from the Belfast Water District property and out to sea. And in all cases everything gets evaluated against a no action alternative. What if we didn't do it? And in some cases it's pretty obvious. If there is no pipe there is no way to get water to and from the site so it can't meet our project purpose, but in all cases we take a look at what happens if we didn't do it that the way at all.

So I'm not going to go through every last detail of the Alternatives Analysis tonight because if I did you'd still be here in three hours, but we do this by looking at decision matrix. We group the criteria under legal and environmental and engineering feasibility and so forth that I talked

about. We weight those criteria. Obviously some things are completely non-starters for the project and other things are areas where there is more or less importance attached to them. So we give those things a numerical score and we give them some supporting information as to why we score things in the way that we do and in our applications you'll be able to read those details if you're interested.

So with site selection, how did we get to Belfast? I think a number of you in the room have heard us talk about this before, so I'm not going to go into extreme detail, but as you've probably heard before we've gone through a process, it took many months where we looked at the coastline from Canada to Washington DC and we used geospatial analysis, state online databases, real estate searches and field visits to ultimately find locations that provide a clean, cold, fresh and seawater, nearby access to three-phase power, an attractive community, a suitable place to build what we needed to build and centrally located. These were a few of the criteria that we were looking at.

This is a map that shows all of the coastal towns in Maine as well as all of the communities in pink where we identify potential sites in our initial

geographic search. At the end of the day, we kind of narrowed that down to four locations and put those four locations through more rigorous analyses and at the end of the day Belfast was the one that was our preferred alternative and because it can provide all of the things that we were looking for in a project site. So Belfast is the one out of all those red sites on the previous map that actually met our project purpose.

For the site layout we actually looked at a variety of different options as well. Many of you will remember at probably our first public meeting we only had the Belfast Water District property. That water district property was 39 acres. We looked at that and said it was also -- for those of you who aren't familiar with it it's somewhat of an L-shaped property, so it's quite narrow in places and we looked at those and said how are we going to put these six modules that we want to grow the 33,000 metric tons of fish onto that land and we found that we couldn't. It was physically impossible to get six modules onto 39 acres of land and have the buildings fit. So then we looked at can we do something smaller. What happens if you make three modules on 39 acres of land? So number one, that didn't, again,

meet our project's purpose because it wouldn't supply us with the same amount of fish. It wouldn't allow us to do the same 3+1 modular design that Ed showed you earlier. And in spite of the fact we had fewer buildings it still didn't fit without hanging over lot lines. So in terms of the setback requirements that Ed was showing you earlier with 40 foot setback and 50 foot setbacks and 75 foot setback from wetlands we couldn't even get three modules to do that because of the configuration of the land. So at that point in time we needed to look at are there larger sites available and can we acquire more land to make this work. And ultimately that answer was yes and we got this up to a 54-acre site and we evaluated whether or not six modules or five modules could ultimately meet the project purpose. And ultimately due to the configuration of what we need and the 3+1 modular design only six modules ultimately meets the project purpose and so it also meets the siting requirements, it reduces our impacts to the natural resources and preserved the eastern stream because of the ability now that we have a little bit more land to condense the buildings into the center of that land and maximize the buffers to our neighbors and to the Little River Trail. It will

also allow us to have process piping and other engineering components fit within the buffer zones, so, you know, for a -- for process piping and getting fish from building to building we needed to have things centralized and having the 54 acres allows us to do that. And that, again, using that 3+1 modular design helps offset the cost for the needed infrastructure and piping. So six modules is our preferred alternative and that's what we'll be putting in our Alternatives Analysis as part of the NRPA application.

The other thing that we were evaluating as part of our Alternatives Analysis is what are the different ways to get a pipeline out to sea and for this we looked at, again, five options that we compared to the no action alternative and these include direct from the site property, so the site into the Little River does abut the site and in theory one could take a pipe straight from where the water district's building is right now and go down the Little River and out to sea. I think it's not hard for everyone in this room to understand that that alternative as shown here in yellow would be quite long and with quite long comes the potential for environmental impacts, but that was one of the

alternatives we felt important to evaluate because we had the right, title and interest with the land ownership to consider that.

I'm going to go back a slide here. The other route we looked at is the southern route that leaves shoreland from an area where we have a property owner who is working with us for rights to go through their land and we looked at that. It's also a fairly long route. I'm going to talk about that a little bit later. We also looked at a straight route. What happens if you kind of come straight out the coast? We looked at going up off of Tozier Road. And then we looked at sort of a curved alternative. And, again, these are all shown on this map and I'm going to kind of go through them briefly one by one.

So as I said, Option 1 was straight from the property shown in yellow. It's the longest route and with that comes a long area to have environmental impacts. Obviously as you construct you are at least temporarily disturbing the biota that are there and the longer you're doing the construction the more opportunity you have to cause an impact, so we felt that this was not favorable from the ecological perspective. In addition, right, title and interest

is a complicated question and it's difficult to make sure you have that when your route is going right down a town line. So the right, title and interest considerations for this would have gotten tricky. In addition, the engineering feasibility and operations would be challenging with the longer pipe route as well as the fact that the Little River itself has got a fair bit of bedrock in it and so for that reason this just didn't seem like a favorable alternative, so we were looking for others. It's also the most expensive given its length.

So another route that was considered is the southerly route shown in blue. It's still quite a long route with environmental impacts. We were able to obtain right, title and interest for this route through the intertidal zone, but due to the bends in the pipeline we think from an engineering and operation standpoint it's not ideal and it is still costly so we have a number of strikes that -- against it that we keep it from being something we would prefer.

We looked at the straight route. Obviously the straight route is the shortest and has the -- therefore the most desirability from an ecological point of view. It's also, you know, easier to

engineer and to operate when something is a straight pipe, but we didn't have the intertidal rights that we needed to make this option work.

We looked at the option of what happens if you go further up and look at Tozier Road. Part of the perspective there is that, you know, there have been properties for sale, perhaps it would have been a possibility to look at acquiring the right, title and interest there. You get into deep water quite quickly up there. The water depth changes more rapidly. There is not as much of a mud flats to go through, so we thought that might be something favorable to look at. And what we ultimately figured out, however, is that there is an increased height of land on Tozier Road. It's higher than the elevation of the water treatment plant that's planned on the site, so we would have had to pump the water up hill for a longer run and, you know, down the street toward the waste water treatment plant and what that does is it means you have to create a pump station. Because of that long run there would have been a need for a pump station in a residential neighborhood, which isn't really something that's appropriate in a residentially zoned neighborhood. So we looked at that and said although it's feasible from an

engineering standpoint and an operations standpoint it's not desirable, so it also has, you know, a moderate cost associated with it because you have a longer distance to take a pipe on land.

So where did that leave us? That left us with the curved route, Option 5. It has a lower ecological impact in both the intertidal and subtidal because it is reasonably shorter. It's it a route -- it's a route for which we have a right, title and interest. The engineering is straightforward. The construction timeline will be minimized and helps us meet our project purpose. And then just for everybody's benefit I'm going to put that up there one more time. So the green route is our preferred alternative.

I'm going to take a brief break and I'm going to introduce Maureen McGlone, who is going to talk to you a little bit about our stormwater planning and then I'm going to come back up.

(Applause.)

MS. MCGLONE: Hi, there. As Elizabeth mentioned, I'm Maureen McGlone. I'm with Ransom Consulting also. I am going to talk very briefly about stormwater. Stormwater doesn't appear to be nearly as sexy as the rest of the things on the

agenda.

This is a real rudimentary diagram of the site kind of just showing the buildings, some of the access roads around the buildings, but what it also shows are some of the treatment methods that we're looking at using on the site to treat any of the impervious surfaces and landscaped areas. First and foremost, Ed showed a diagram earlier of the erosion control and actually multiple diagrams of the erosion control. The first part of the erosion control is to sort of cutoff the stormwater from more upland areas, mainly from Perkins Road and beyond. So in -- oh, there we go. They usually don't give me a pointer that actually works. This is great.

So right along this border up in here we'll be having what I like to call an intercepter channel, which is essentially we're capturing the stormwater from upland areas and we're going to reroute it around the site so it doesn't become an erosion issue. Treatment of the impervious surfaces, which is the pavement and rooftops as well as any grassed landscaped areas will be done at every storm. It's a DEP requirement and it's something that we're very, very proned to doing here. We've got four different types of treatment methodologies that we're using on

the site. We're going to try and keep them local to where the stormwater has been generated.

First, I'm going to identify -- oh, jeez, wrong button. All right. The green roofs here are exactly that, green roofs. So on some of the flatter roofs that don't have as many penetrations or as many mechanical units on top we've proposed using vegetated roof cover and that provides us an opportunity to treat the stormwater before it actually gets to the ground surface. We looked into using it also on the much larger buildings here, but those buildings, and I don't know that Erik has mentioned it, but those buildings are going to be supporting some solar panels so it became another -- we came up with another option for treatment of those. And in these buildings here, each one of these different modules because they're being built in separate -- in succession, we've come up with these subsurface sand filter locations. Now, a subsurface sand filter is basically going to take the roof runoff and it's going to put it through a filter system that is below grade. You're not even going to see it.

In these areas here, this gray, this is what we call our vegetated or grassed underdrain filter.

We're going to take some of the impervious area, which is your pavement, as well as some of the landscaped area, we're directing it to these soils, if you will, with filter systems in them, we'll treat the water there and pipe it around. In blue, there we go, these are in mostly parking areas but also around the perimeter of some of -- some of the other areas where we have more pavement we're putting impervious pavers. An impervious paver system is a means to take water that will filter down through the pavers rather than collect on top, filters down through, we have a filter system below it, we collect it and then transport it.

These are some pretty pictures. This here is a snapshot really of what the porous pavers or impervious pavers will look like. We're proposing to use those primarily around the outer edges of many of the parking areas as well as in the parking stalls themselves. This is a simulation of what a green roof will look like. We're looking at different vegetated options. And this is more like what your grass underdrain filter will look like. I don't have a system -- I don't a picture for the subsurface sand filters because they're, well, subsurface.

Okay. Key points that you really want to

take away from this. There is a DEP requirement to treat 95 percent of your impervious surfaces. We're exceeding that. There is also a DEP requirement to treat 80 percent of your developed areas, which is all of your landscaped area and all of your impervious surfaces. We're far exceeding that. We're at 86 percent currently. Any of the stormwater treatment methodologies that we're looking at are tried and true methods and they're all approved by DEP.

I guess if there are any questions you can hit me up later. I hope you enjoyed your break, Elizabeth.

(Applause.)

MS. RANSOM: Thank you, Maureen. Yeah, you guys are going to get tired of hearing my voice, so I'm happy to give her a chance to talk for a little while and we'll have somebody else coming in a little bit as well.

So I'm going to speak briefly about noise, odor and air. They are important, but I'm going to give them a pretty quick summary that I think will tell you what you are interested in hearing.

So noise. Everybody wonders, there is a new thing coming to town, what kind of noise is it going

to make? As part of the SLODA permit we are required to look at that. The -- in addition, during the city permitting process there are city regulations governing sound. One of the things that is an easy way to think about sound is we're all familiar with the typical noise level of some of the things that are listed on the bar chart here. So we're required in the state to keep below 55 decibels during the daytime and below 45 decibels at night and lower in certain protected areas. And we've done a noise evaluation that will be a piece of our application to study what is going to be the impact of the facility, where does the sound that's generated go and what are the resources in the area that might be receiving those sounds and what we want to emphasize with this slide is that Nordic's project is going to meet the state and local regulations for the permissible noise thresholds. In, general, just to give you an idea, I'm probably talking at something that's around 60 decibels, maybe louder because I've got the microphone. So I'm talking at a volume that's louder than what their operation it going to be permitted to emit during the course of the daytime. And at night it would drop to something like this.

One of the other things that people are

obviously concerned about when you hear that something related to fish is coming to town is is this going to smell? What's the odor? So the first point I think we all want to understand is in Nordic's case everything they generate is a product and when we think of odor and fish we're usually thinking about waste. The thing that's causing that odor is some product is out -- some moist product is out where bacteria can grow outside in the sunshine and it makes that odor. Their product is going to be indoors. They have potential sources of odor, but it's how you manage that odor that keep it from being an issue. So the potential sources, they're required to identify what those sources are in their application and the potential sources are the wastewater treatment plant, fish feed, fish processing and mortalities. Fish sometimes die unexpectedly. So those are all things that could cause an odor.

What are the control measures? How do they keep that from being an issue to the neighborhood? Well, first of all, everything is indoors, so right there you have a barrier that keeps the odors from getting outside where people in the general public might smell them. But beyond that, they are taking

additional measures to make sure that odor doesn't become a problem. So their wastewater treatment plant, for example, they're dewatering it, so they're taking right away one of the steps that would potentially lead to bacteria growing and making that odor. And they are -- they're dewatering it and then they're taking that and sealing it in the tank and transporting it off-site because, again, that filtrate is a product. It's a product that there is need for. It's got agricultural applications, for example. So that's something that they're not going to allow it to sit there and develop odor.

In addition, the feed that they bring in is going to be stored in enclosed silos inside their buildings, so there will be multiple barriers to something that you might smell so it's not like it's going to be sitting outside their facility on a pallet. Mortalities, should they occur, they're going to, again, remove those from the tanks, preserve them and ship them off-site. So, again, everything that they do, their processing, fish processing, the cuttings that they take, those are going to be sealed and vacuum packaging, frozen and transported off-site because that's valuable product as well.

So the way that we avoid odors is through best management practices, good employee training, the fact they have staff with decades of industry experience, they're doing this in other facilities, and then we have trusted local partners who want these products and are going to remove and recycle those potential sources of odor.

Air is a real brief one. In Maine, there is a licensing requirement for certain thresholds of use of different equipment and those fall under Chapter 115, the Minor Source Air Emissions Application is what we're going to be submitting. Our application will cover two things that might require air permitting and air licensing and that's the fact that should the power go out, which it tends to do here on the coast of Maine, there will be a back-up generator that will need to come on to provide life support for the fish and those generators will be fueled by diesel and so that it something that could ultimately require air emissions permitting. In addition, there will be a 6 million BTU, British Thermal Unit, per hour boiler. And those pieces of equipment when operated to meet the needs of the facility or the potential needs of the facility during a power outage would require some air licensing. So each piece of

equipment is going to be designed to meet the best available control technologies as specified by the Maine regulations, that includes particulate control measures, but in, general, the air licensing requirements for the facility are quite simple.

So we're now going to go into a little bit of a discussion about the water supply. I'm going to talk briefly about how we initiated a field program to look at the water resources for the project and then I'm going to introduce Mike Mobile to come up and talk a little bit about our modeling efforts to look at that in greater detail.

So why did we do this? Well, first of all, a project like this does need water. We've done a significant amount of engineering since the last time Nordic has been up here talking about water and we've looked at different ways to reduce the project's needs for why we need to take fresh water and we have looked at what the available sources of water in the project site are and those include what the state terms significant groundwater wells and there is an application that goes in as part of SLODA for the significant groundwater wells. The project will also be a Belfast Water District customer. They will be acquiring a certain amount of their fresh water

through the city's supply and then they'll be looking at a surface water withdrawal as a back-up source. And what our project was designed to do is look at can we use these water resources assignability and what is the appropriate way to study the water resources today so that we can demonstrate whether or not our future use is going to cause harm.

So how did we do that? Well, it's been nearly a year of studying it to stand up here and tell you about it and to put this application in and have it be complete. We did a series of different testing out there. We started with geophysical physical testing. The diagram you see here on the right is looking at the resistivity of the rock and we look for variations of the resistivity of the rock to point out where we might have more fractured rock versus we have more competent rock. And it's those fractures in the rock that are telling us where we might see water because we don't want to just put holes and look for water arbitrarily. We want to go where we think that we have a good chance of finding fresh water, so we started that with that geophysical survey.

From there, we started to drill and we drilled wells, we drilled small diameter multi-level

piezometers designed to look at some of the more superficial features, but we looked at both the overburden and the bedrock. We looked at the interaction between the shallow water and the streams the surface water features on-site. We measured the surface water features on-site. We had staff gauges and other ways of measuring what was actually moving through the Little River and in the reservoir itself. We conducted four pumping tests over the span of a year. We started with one last April and we concluded with one in January/February of this past winter. So that's a significant amount of time and a significant amount of datapoints to measure and inform our conceptual site model and set up the groundwater modeling for the project.

With that, Mike is going to come up and talk about that model.

(Applause.)

MR. MOBILE: Good evening, everyone. My name is Michael Mobile of McDonald Morrissey Associates and it's really -- I appreciate the opportunity to be here tonight and to describe the numerical or mathematical groundwater modeling we performed for Ransom and Nordic -- the proposed Nordic facility in Belfast. I realize we're running

a little bit late on time, so I'm going to shorten a couple of my slides. I'm happy to answer more questions on the stuff I skip through a little bit, but I want to make sure there is ample time to answer your questions at the end of this.

So I'm going to start off with a quick executive summary to touch on kind of the key take away's from my presentation tonight. As Elizabeth just alluded to there has been a significant volume of information and data gathered through a detailed hydrogeologic investigation that's been conducted over the past year or so. With that volume of information and data we've created a mathematical model to support estimates of aquifer responses, particularly the bedrock aquifer below the site to propose withdrawals meaning pumping from bedrock soils on-site. What the model results indicate is that proposed withdrawals are not anticipated to influence current use of domestic wells to neighboring properties meaning domestic private wells located on properties abutting the site. Going forward there is data gathering to do to help establish baselines and to help in the form of a proposed monitoring program that will accompany the permit applications.

Subjectives and approach. It's interesting the color change on that slide, but number one is to construct a groundwater flow model, right. And to construct a model we need to demonstrate it's consistent with the data that have been collected and adequately represents the responses that were observed during hydraulic testing. With that model in hand, we want to ask questions of the mode, right. What if. What if Nordic pumps -- what happens in off-site locations. What we're going to look at changes in terms of is going to be a term called drawdown, so that's a change, a decrease in water level due to that pumping.

In performing our assessment approach-wise we used common modeling software MODFLOW USG. That's a software that's publicly available from the U.S.G.A. survey. We also followed common modeling -- a common modeling approach that the diagram on the right-hand side describes. So we start off with a conceptualization of a system, we build that's called a conceptual model. With that model in hand, we use it to guide how we actually build a computer model. Then we enter a phase called calibration and verification. In calibration you're basically anchoring the model using data. You want to, excuse

me, you want to alter or you want to modify the values of key hydraulic parameters to develop agreement between what the model is predicting and what the data that are collected at the site say. And then in verification you're basically taking that calibrated model and running it versus an independent or different dataset to ensure that similarity is maintained. And then in application, that's the what if phase, right. So you can test the model, test different pumping scenarios to see how the model responds.

So I'm going to shorten it here. The one thing to touch on here in terms of conceptualization is that what we know about the site is that it's about 50 acres in area, but the area that influences groundwater flow at the site is really much greater so we had to look at a much broader area. And one key kind of feature of the study area is the recharge and that's defined as water that occurs at the surface, infiltrates and ultimately becomes groundwater so the main driver is precipitation, right. What we know about the site, again, is that the nature of the superficial deposits here are such that they don't convey water easily. If you think about a sand and water gravel deposit that conveys

easily, you can get up to 50 percent of your annual recharge of coming -- or annual precip becoming recharge. In this area we have a silt and clay dominated glacier marine deposit called the Presumpscot Formation that really limits the amount of recharge and we've accounted for that in terms of our conceptualization.

So model representation. This is that step of converting our conceptual model to the actual mathematical model. On the right-hand side you see lines basically breaking the area up in blocks, that's actually a finite difference grid. That's what we call a finite difference grid. It's breaking up space and actually the volume into finite volumes where governing equations are being solved by MODFLOW. It's calculating the water level or hydraulic head at each location and groundwater flow is being calculated between each one of these cells, so it's a complicated process, but we're good at it.

So calibration and verification. When we build our calibration run, we build it around the first three pumping tests that were conducted at the site. We take those data and we feed them into the model and we build the model to represent the pumping steps that occur during those tests. The three

tests, March/April of 2018, August/September of 2018 and November of 2018. All different forms of tests that we built into the calibration run. When we run the verification period, we take a fourth pumping test, so four pumping tests during this hydrogeologic investigation. We take that fourth pumping test worth of data and we build the verification run around that.

When we perform calibration we start with manual parameter adjustments. We make small changes and make sure the model is reacting the way we expect it to and then we use a process called automated brand parameter estimation. It's actually supported by a separate utility and we use a network system of computers that runs the model comparatively, actually running the model thousands of times to reduce that difference between measured conditions and simulated conditions, so a really powerful tool that we apply.

And then the final two notes just talk about the fact that we really considered a large number of hydraulic parameters in this process and more meaningful is that we considered a tremendously robust dataset, so a lot of data collected during the hydrogeologic investigation, pressure transducers in wells collecting water levels at a high frequency

route, we rolled that into the model so overall comprehensively between the calibration run and the verification run we considered more than 200,000 individual datapoints, so a really robust dataset that we used.

I'll be somewhat short here, but what do the calibration and verification results look like. In one word, they're good. There is good agreement between what we collected in the field in terms of water levels and what the model predicts. Flow rates agree well where we have gauging data in the Little River stretch between the upper and lower reservoirs, good agreement there and good agreement in terms of verification, so that consistency was maintained in the verification step.

So then we go into model application. What we do is we take the model and we feed in what's called a pumping scenario. That means pumping rates and location in terms of pumping wells on the proposed site. The pumping scenario that we tested, it was 455 gallons per minute distributed amongst three bedrock supply wells at the site and then we performed two forms of simulation. On one side of this graphic you see transient, that's the time during the simulation and what that simulation gives

us in terms of an answer is an idea of the rate of change, the rate that drawdown develops. Results on that end are that the model suggests that drawdown is relatively slow at off-site locations. So locations that coincide with private supply wells and adjoining properties we see that it takes several to many years for that condition to really develop and start to stabilize. Then we run what's called a steady state simulation. That's an unvarying condition and really what it does is it projects the results out that maximum change condition. We wanted to be conservative. We didn't want to just put out the end of the transient results as results because we knew there was still room to change and that's what the steady state simulation gets us to is that stabilized result. And on that end what we see in terms of our results is that it varies by location, so, you know, areas west of the site show a different result than areas to the south or to the north. The range of results is really from no change, no measurable change, zero drawdown up to an overall maximum of 15 feet. In areas of the highest density of the public -- or private supply wells, so areas west of the site, we see around 10 feet of stable drawdown in that area.

So those are just numbers, right, no context. So what we did is we put this slide together to give you some context. So what we know about wells in this area, private supply wells, is that the average well is approximately 150 feet deep from land surface. So that's the graphic you see here, that well penetrating into the fractured bedrock aquifer. We also know from available information that the depth to water in these wells ranges from approximately 5 feet to approximately 30 feet, so if you do the math there and subtract those numbers you get a standing water column, ambient water column in that well approximately 120 feet to 145 feet, okay. So that's the level you see in that graphic.

On the right-hand side is something else we know, that when you pump these wells, as an individual pumps their own supply well the water level changes. So that water level in that bore hole is drawn down by the pump that's inside the well. So what you're seeing is real data. This is data that was collected during the hydrogeologic investigation from one of the private supply wells adjacent to the site and you see that domestic use cycling, changing the water level and that signature. And you can

basically think about that blue line as being coincident with this level in this graphic, okay. So we see about 5 feet of change in this example. We have other examples where we've collected data where it's a bit more up to 10 or a little bit more feet, but that's a fluctuation around that ambient water level. What I'm talking about in terms of steady seeing results from the model is that really what we're talking about is a shift down depending on location by a relatively small amount in this well, so it could be up to 15 feet and the maximum overall case areas west of the site we're talking more about like 10 feet under average annual recharge conditions, but it's a relatively small change. There is still ample water column left in that well.

Now, there is still more information to collect, baselines to set and monitoring programs to be proposed as part of a permit application, but the results of this modeling and the data that we have suggests that there would be no impact from the proposed pumping to private supply wells in the area.

So to summarize, we successfully created our groundwater model, common techniques were supplied and we used a significant amount of field data that was collected during hydrogeologic investigation.

Calibration and verification were also successful indicating the models were a reasonable representation of hydraulic responses and site withdrawals. As I just mentioned, the model results indicate that a proposed withdrawal scenario of 455 gallons per minute at the site is not anticipated to influence the current use of domestic wells at adjoining properties. And to wrap up, still data gathering, we're going to establish thresholds and a monitoring program will accompany the permit application and Elizabeth will talk about that a in little bit. Thank you.

(Applause.)

MS. RANSOM: Thank you. I'm just going to go back to one of Mike's slides briefly in case the point wasn't clear. One of the things that you're looking at here on this graph to the right, those are -- those fluctuations you're looking at are daily fluctuations in the use -- typical use of a private well. So when you turn on your washing machine or faucet or take a shower, that's when you see the downward dip on that graph and it comes back up again as your well responds to you turning off the faucet. So in case that wasn't clear, some of the fluctuations you're seeing there are what occur

during the daily use of a private well. I would -- I do want to also thank the neighbors who participated in our study so far and for their continued willingness to participate in monitoring going forward. It's really helpful to have your participation so that we can better understand the aquifer as it's being changed around the site.

So now I'm going to give you a very brief overview of the monitoring plan. We will be as part of our application submitting a monitoring plan and that monitoring plan will be to cover a couple of different things. One is obviously to cover the groundwater withdrawal and make sure that we continue to withdraw groundwater in a way that doesn't affect the neighbors. But it is also there to monitor water quality in the area surrounding the site, so we obviously are -- as we develop and as we do construction we want to make sure that we're not affecting the water quality or the habitat in the areas adjacent to the property.

So we identify as part of our monitoring program what are the sensitive receptors that might be monitoring, that includes things like those private water supply wells that we were just talking about, which is primarily located to the west of the

site in the direction of Herrick Road, it includes wetlands, streams, the lower reservoir in the Little River. And we'll be evaluating those through a series of different monitoring points, those include our own production wells on-site, bedrock monitoring wells, overburden monitoring wells, the private water supply wells in the neighborhood, those narrow diameters, small multi-level piezometers adjacent to the surface water features. It will include surface water stages so we can actually measure what's going on in the Little River and the reservoir. And we'll be looking at precipitation data for the Belfast area as a whole as well as biological monitoring.
We'll be looking at not just water levels, as I mentioned, water quantity but also water quality. So we'll be looking at things like conductivity, nitrogen, phosphorus, bacteria, common drinking water parameters that some of you might be familiar with if you have a home well, things like hardness and pH and dissolved solids. We'll be looking at vegetation, aquatic macroinvertebrates, insects and, as I mentioned, precipitation records. And that ongoing monitoring program is something that not only is it a state requirement but it's helpful for Nordic as well, so we're going to be trying to establish a

baseline and get some monitoring done prior to operations and they'll be keeping that monitoring going as they ramp up because remember they're not going to start with 33,000 metric tons on day one, they're going to start this slowly. So as they get going, we'll be able to look at that impact of the start of their operations to better influence how they operate during the latter stages of their operations

So how do we -- how do we do that? Well, first, as I mentioned, we do a -- we do have some data that we've started to collect and we're going to look at what are some things we can do now to establish baseline conditions and develop a robust monitoring program and in an ongoing basis do data evaluation. What is that data telling us? What are we learning about the site conditions? What are we learning about the neighbors' wells and the various surface water features around the site? We're going to have established performance criteria. Some of those are things that are regulatory thresholds, but some of those might be thresholds we set ourselves where we say, you know what, we get to this condition we want to take some sort of an action and then we're going to develop that action plan.

So what might that action be? Well, if we understand that we're having impact of something it might be as simple as, jee, we need to do something to address an erosion issue that we're developing on the corner of the site now that we've had a storm or erosion control measure didn't grow in the way we expected it to we need to replant. It might be as simple as addressing a need for a different type of water use at the facility. So we're going to have threshold levels and action plans and that will all be part of our application submittal.

So you've heard me reference on a few occasions the natural resources on the site. I'm now going to take a little bit of time to help people understand where those resources are located, how we went about identifying those resources and how we intend to, you know, modify and move forward with the project and compensate for anything that we might be doing.

So we looked a variety of different things. One thing we looked at is wetlands, a review of the wetlands was conducted during May, July and August of 2018. Normandeau, who is here in the audience, conducted wetland delineation according to the applicable US Army Corps of Engineers delineation

manuals. And the determination the jurisdictional limits of the wetlands were completed using a three parameter approach in accordance to the guidance manuals.

They also conducted vernal pool studies. Those are also done May 3 and 4 with a return visit on May 18. There were no vernal pools, that's why I don't have a picture on this slide.

They also conducted a review of drainages. So not every drainage with flowing water is, in fact, a stream. They conducted a review of the drainages on site in May, July, August and February to observe flows and aid in the determination of whether or not they are, in fact, NRPA jurisdictional streams.

So what is a jurisdictional stream? This is a long definition, I'm not going to read the whole thing, but in order to be a stream that is jurisdictional that has a defined channel in two or more of the characteristics listed below. I'll give you a second to take a look at that. But when we look at that -- I'm going to go back to this. When we look at the bottom slide here, I think most of you can see from that bottom slide that has a clearly defined channel. It's not hard for you to find it out in the woods. It clearly stands out to you. It

has a mineral bottom. You can see that there is soil on the bottom of that stream and you can see that it has flowing water and we verified whether or not streams out there had running water for six months or more of the year.

So with that, we created a map that shows what are the natural resources on the site and from this you can see those sort of lighter green areas are the actual wetland features that were mapped and the blue areas are what we consider to be NRPA jurisdictional streams. And the one that I want to point out in particular is the one that kind of forms the eastern boundary of the site. It's the one that most of you maybe come out and use the trails will be familiar with that kind of cuts down sort of behind the garage buildings for the Belfast Water District and flows out through the grassy swale on the front of the property and then out under Route 1 and through the culvert. That is the mapped resource that if you all kind of looked at a U.S. Geological Survey topographic map you would be able to pick out that stream. And so that's the stream we've done our best in our site layouts and our evaluation of how best to use the site that's a resource we've tried to steer clear of and enhance as a part of the project.

So I'm going to talk to you a little bit about that enhancement. In the State of Maine if your development is causing alteration to the wetland resources there are ways to go about making up for that and we will as part of our application have a proposal for how we intend to compensate for or the things that we couldn't avoid. So if you look at a series of can I avoid it? If I can't avoid it, can I minimize it? If I can't minimize it, how do I compensate for it? So some of the compensation that we're going to be proposing include a culvert -- some culvert upgrades to enhance aquatic passage on the wetland features that are on-site. We will be creating a new riparian buffer of approximately 4 1/2 to 5 acres and restoring approximately an acre of wetland vegetation in the process. Nordic is working with the city to try and acquire and conserve a section of land located adjacent to the upper reservoir and then they'll also be participating in the state and federal in lieu fee programs where they will write a check to assist with the conservation of land in other locations.

So I'm going to show you a little bit of what those look like. This is an existing culvert in the project site that you can see isn't probably in

the best shape to convey water nor is it in the best shape to help aquatic life survive in this stream. So one of the things that we're proposing is to take that existing structure and build a span that would go over the top and allow natural vegetation to grow on the bottom and water to flow more naturally through the feature and provide connectivity to the existing groundwater and so it will enhance this as part of our wetland mitigation.

In addition, the area shown here in yellow -- on the these yellow features here those yellow areas will be planted and restored with appropriate native wetland vegetation. The picture on the right shows you sort of the front of the Belfast Water District driveway, that drainage area will also be enhanced with plantings and we'll be deed restricting that so that anything within 75 feet of that stream on the site property will be deed restricted to keep from having future alterations. In addition, there will be a portion of Mr. Cassida's property that will enhance the vegetation there as well, so in total the project will gain close 5 acres of riparian buffer.

And then just briefly, this is a -- I apologize, there is a lot of information on this.

This is how it prints out from the State of Maine geographic database, but the conservation parcel is outlined in blue. The large brown area you see to the north of that is actual dear habitat, dear wintering area, but there is a large plot of land there that Nordic is working with the city to try and find a way to help preserve and should the state be amenable to that as well it will be considered as part of our wetland compensation.

I'm now going to very briefly give a quick overview of our MEPDES application. So I'm not going to spend a lot of time on this. I think many of the people in this room have attended previous public meetings and know probably as much or more than you want to know about a discharge application. This one slide is intended to provide the details quickly. I will say if you do have questions about the MEPDES application it is available online. It's available on the City of Belfast web page as well as I believe through the Maine DEP and I'm happy to answer questions that you might have about the MEPDES permit. It's -- in Maine the state administers all discharge permits, not the EPA, and the Maine DEP reviews these permit applications. We have that for the facilities discharge and the summary of that

application is that it uses proven wastewater treatment technologies. These are not something that Nordic is inventing for their process. They're just taking well-proven processes and applying them to a new industry. The discharge will meet or exceed all applicable water quality standards. There will be a monitoring program both to establish a baseline and to monitor through the life of their facility to ensure compliance with their permit and that data will be submitted through third-party peer reviews, so not just that Nordic and the DEP but people out here in the audience will have an opportunity to understand if they're truly doing what they say they're going to do.

Okay. With that, I think Lee is going to come back up, set the stage for some question and answer.

(Applause.)

MR. WOODWARD: Just to let you know, we only have this location until 9 o'clock, so we do have an hour and 15 minutes for questions. I want to go over some very brief ground rules. If when you approach the microphone, and some already have, if you would state your name and speak directly into the microphone out of respect for our court reporter. If

everyone would keep background noise to a minimum so, again, the court reporter can take down the various questions that are being asked. And so that we can address as many as questions as possible, I'm going to give you two minutes to get your questions out, if you would limit the commentary and get right to the question at hand it would maximize the amount of questions that can be asked. The only weapon they've given me up here is a mute button and I can think of most city fathers here who would just as soon have used that on me on more than one occasion.

So, again, we will start off, I see that people have started to line up. First question.

AUDIENCE MEMBER: Hi. My name is Jason Ron and I just wanted to thank everybody, I'm not going to take two minutes, thank everybody for being here tonight. Some of us are paid to be here, but most of us are here because we care about our homes and that's really important. All of us could be at home drinking beer and watching Netflix or whatever, but we're here and we're participating in democracy and that really matters, so thank you.

(Applause.)

AUDIENCE MEMBER: I'm Sid Block and I'm from Northport. And I thank the presenters this evening,

you have presented a very impressive survey of your plans and expectations, albeit necessarily superficially, and I accept your sincerity and your goodwill. Still, I have not made up my mind about the merits of your proposal and I'll tell you why and then get to the question. The reason is that many knowledgeable people at your prior public sessions online and various newspapers have voiced what seem to be reasonable questions about the validity of the information you have presented and to date there has been no independent, objective analysis of your data, including right, title and interest, scientific data, environmental projections and economic projections. I am reassured, however, that the Maine Board of Environmental Protection will be holding formal public hearings to review your scientific studies and claims.

Pending these hearings, I must tell you that I remain especially concerned about our aquifers and your and your discharge, which will amount to 100 million gallons of standing effluent only one-half mile of the mouth of the Little River into 40 or 50 feet depth of water less than a mile from the beaches and the swimming dock along the northern shore of Northport directly into the path of migrating elver

population, a potential harm to lobster and then down the bay towards other profitable smaller agriculture including oyster farms. And though I have some worries about the effectiveness of our regulatory agencies one only need be reminded of how the FAA did not thoroughly investigate and deferred to Boeing's data for the 737 Max 8 jetliners. And now, I'm not implying at all that the NAF fish farm will result in any immediate or disastrous loss of human life, rather I am implying the NAF fish farm might result in a long-term substantial environmental harm.

Those worries aside, I will await the results of the DEP hearings before coming to any further personal conclusions and I urge the population here to do the same.

My question is that you are presenting information about four permits tonight, all of which are quite complicated, and I am asking whether you will give the citizens the opportunity to carefully read and fully digest all of the information by extending time for a public commentary by continuing this meeting after 9 o'clock and extending this so that there can be another section at which point the citizens who will have had the opportunity to carefully review your data will be able to ask you

more intelligent and pointed questions. Thank you.

(Applause.)

MS. RANSOM: Thank you, Sid. I'll try to answer that as best I can. What we -- obviously we've tried to put a lot of information into this meeting and some of what may be lost in there is some procedural details. First of all, I will encourage anyone who has a question about either tonight's session or following reading our application, the application itself, to submit written questions. We will be reviewing written questions. We'll be -- no doubt some of those questions will be the same questions that your neighbor has, so feel free to do that. In addition, the application is going to ultimately once submitted be available online through the Maine DEP. I have no doubt the City of Belfast will post a copy of it as well. You're welcome to review the application and post questions at that time and we will do our best to answer those questions. So there will be also, just so people know, when we submit that application the DEP staff will have a period of time where they are reviewing it and looking at it in great detail before it goes to the Board of Environmental Protection, so there will be time between application submittal and that

Board of Environmental Protection hearing for the public to develop their opinions and understand what the contents of the application are. So I hope that answers some of the questions there.

AUDIENCE MEMBER: Thank you, Elizabeth. I'm Larry Theye and I live with my wife, Betty, at 286 Northport Avenue. Our driveway is directly across the road from the driveway of 285 Northport Avenue, which is, as you probably know, the water district and the future home of Nordic Aquafarms.

We have attended all of the previous meetings that have been called by Nordic, but we have never spoken because we don't wish to be perceived as newbees. Now that the Nordic Aquafarms project has extended not only into our back yard but also to our front yard and our side yard it's becoming increasingly difficult for us to sit quitely on the sidelines. While we have many concerns regarding this project, others have addressed these concerns, so tonight I am going to focus only on one that affects us directly; the ravine and the stream that serves as the property line between our lot and the neighboring lot to the north which holds Nordic's permit and easement.

When we built a rock seawall to replace the

decaying wooden wall, we purchased a temporary easement to cross that same property in order to access the shore. When Nordic's purchase of the easement was announced it made a lot of sense to us because it would follow an already established lane to the shore, but we learned just recently that the route of the pipes will not follow that lane but will instead be located to the south of the property's driveway. That will place the construction trench on the steep grade right next to the stream that serves as our property line. It will also involve the removal of numerous mature trees whose roots now serve as a stabilizing force that holds the bank and prevents erosion. We've already been concerned about erosion along the stream as increased run-off has caused several trees to collapse into the ravine. The stream drains the run-off at snow melt from the water district and it was mentioned by Elizabeth as their main focus. When the woods are replaced by impervious structures, very large buildings and paved lots that greatly increased run-off will create serious erosion problems in that ravine. Nordic has promised to address this problem on the north side of the stream, but my question is would you also address the erosion problems that will be occurring on the

south side of the stream on our side of the stream?

Moving the piping further south than originally planned also apparently moves the water treatment plant, which was tentatively sited in the middle of the pine grove next to Route 1. It will now be sited apparently on the south edge of the grove, which I think will be in full view of Route 1 and Erik earlier assured the public that we would see no changes from Route 1. Apparently that no longer holds. In the future, the public on entering Belfast will immediately gaze upon a water treatment plant across the street from a Welcome to Belfast sign.

(Applause.)

MR. COTTER: Thank you, Mr. Theye. As we have talked about today, there are significant wetland issues to understand and be part of our application. The ravine and the stream that you discuss is obviously a valuable area that we are looking at very hard. The path that the pipeline is going to take will be through -- will not be through the stream, it will be on the north side of the stream. And we've walked that area with DEP through -- during pre-application meetings, they have noted the concern for that bank and the current erosion as well as the potential future erosion. Our

application will certainly address those through stabilization measures, plantings, rip rap and any other tools that are available to make sure that that area of the ravine is not only as good as it is now, but, in fact, better because it is currently not an acceptable condition in DEP's eyes, so we will be looking at that.

As far as quantity of water, we will have a solid understanding and presentation in our application about the amount of run-off that's expected and our design will anticipate that and deal with that appropriately. We're more than happy to continue discussions with you about your side of the stream and if we feel -- and we discuss it and it seems like there will be an issue, I'm sure there is a way we can solve that and make sure it does not became an issue in the future after construction.

AUDIENCE MEMBER: (Larry Theye.) Thank you.

MR. COTTER: I think I got everything there. Oh, and the wastewater building. I'm going to just look -- go back in the slides a bit here. So the -- I'm not -- maybe I'm not going to be able to go that fast, but the visual impact study that SMRT provided actually had a very good view of the waste treatment plant. The waste treatment plant is -- the location

has really not shifted. What has probably been added is that we understand that there is going to be some work in that area because the pipe does need to come out of that building and across Route 1, so the area will be impacted, however, this view is really standing at the wooden Belfast Water District sign right now and as you can see the tree stand to the right is substantially impacted. We will have impacts to it and we will also be providing new plantings, not only young saplings but also whatever size mature tree we can responsibly produce and ship to the site and plant so that at day one you won't just have a couple tiny little saplings you'll have some cover day one and it's only going to get better from there. But this is a true or a best effort of a true rendering of what that site is going to look like not far after completion of construction, so we do feel that the visual impacts are pretty well mitigated.

Finally, just so you know, the front face of that building is an area that we're going to give very -- a lot of attention to. You'll get a chance to see what that's going to look like in the Belfast Planning Board sessions and we understand the impacts of that building and we're focusing on it greatly for

that reason. Thank you.

(Applause.)

AUDIENCE MEMBER: Hello. Thank you very much for having us all here. My name is Garrett Willsednas (phonetic). I'm a resident of resident of Belfast. I am an information architect and I work on conservation technology projects. I appreciate your openness and your willingness to include us Belfasts in a noisy and lively decision-making process.

We are building in Northport and we will be about as close to swimming distance to your effluent pipe as you could get and I am comfortable with the figures I've seen so far. I appreciate very much what your project will do for the tax base in the area as well as tying the various educational programs in the state to an actual place where you can work on aquaculture projects here in Waldo County.

My question for you is really with regards to the energy usage for your recirculating aquaculture system. Growing fish is a lot cheaper carbon-wise than beef or say mutton, but recirculating systems, as you guys know better than I do, use a lot more energy than say most other forms of raising fish or fishing from vessels. My question

to you is how much of that energy do you intend to offset and is it possible, if at all, to make this project carbon neutral or carbon negative, net zero?

MR. HEIM: Yes. So generally a project like this like we are working with it is to look for any source of renewable energy and that's an incorporative part of the project, solar and heat exchangers are key components to that, and those are really the main renewable resources for energy recapture purposes that we have locally for this kind of a project.

The alternative if you want to look at a totally energy neutral solution would be to fish wild salmon off the coast of Maine. Unfortunately, that's forbidden because of endangered populations, so if we can choose a very best alternative that would be the one. The next best alternative in terms of that will be net pens in the ocean in the area and that doesn't seem like a very likely solution either. So the remaining solution you have is basically the remaining wild salmon populations in Alaska, which is the majority of your salmon population in the U.S. or airfreighting the fish, which is the remaining. And when you add up the energy equation for airfreighting fish into the U.S. it gets pretty messy to put it

that way. And that's also when you look at the research airfreighting fish into the U.S. has about 15 kilos Co2 emissions per kilo of fish, so that's an issue there. So we are about one-third of that. So in the end, we are implementing all kinds of energy reduction mitigating measures we can with the tools we have available and leaving a significantly reduced footprint compared to what most of the fish in the market today has and that's where we're at right now.

Getting into energy neutral is virtually impossible with this scenario, but we are doing everything we can to lower it compared to what you are seeing. I don't know if that answers your question.

AUDIENCE MEMBER: (Garrett Willsednas.) (Phonetic.) It does. Thank you.

(Applause.)

AUDIENCE MEMBER: Hi. My name is Trudy Miller. I live in Northport. I just want to start by saying I am not an expert in marine biology or hydrology or aquaculture or wastewater treatment systems or most other things in the world, but I did spend a career working in high technology. I know a lot about the sorts of decision-making processes you go through when you're producing cutting edge

technology. I understand the planning, considerations, trade-offs. I don't know your specific field, but I know the sorts of things you have to do and I have a lot of respect for it. I also understand because I worked on the development of the internet what comes with things making something scalable, so I find that quite interesting about what you're doing. It's been a pleasure for me to hear your presentations, to hear you talk about your systems and your facility as I enjoy hearing people talk about their fields of expertise even if they're unfamiliar to me. It reminds me of working in high tech and how exciting that was. And it's also a big treat for me to see younger people coming to Belfast to work on this and I hope there will be a lot more of them.

I think a lot of what the -- I do have a question actually. It's coming. A lot of the discussions that we've gone through in the last year really I think has to do with trust and because I'm not an expert in something I have to decide who I am going to trust and why to feel comfortable about what's going on. It's part of what education is about. I trust right now, I trust Nordic Aquafarms to know what you're doing based on both my

observations of these presentations and even more so on the common sense fact that if you don't know what you're doing you're going to lose a butt load of money. I don't understand why that isn't obvious to people. So and then I have to trust our local government, which I do because I think they know what's good for Belfast in the terms of balancing growth and stewardship of the environment and I think this has been demonstrated to date. I haven't been here very long, but I've seen this. And I have to trust the state and federal permitting agencies to know how to ensure that our environment can be kept safe while the state grows and thrives. Maine is going to die if it doesn't grow and I think we all know that.

So, I mean, basically that's what I have to say. And if something comes up in permitting that shows this is really going to be a real detriment to our local environment of course I'm not going to be in favor of it, but I have nothing to date that would prove that's the case. I'll leave out my snarky tweet I was going to read and then I'll get to my question, which is I have read somewhere not too long ago that you are prohibited from selling byproducts as lobster bait because of current state regulations

and I want to know is that true and, if so, how you -- what you can do about that.

MR. HEIM: Yeah, so as of today regulations has been created for net pen operations and regarding the salmon cutoff, so we have been in dialogue with the lobster unions and also the DMR of the state and they are favorable to doing this. The basis for doing that and the reason why you want to be rigorous here is that you want to make sure that you do not have the risk of transmitting any disease, so that's why a program like this will be subjected to a health certification program according to the same routines as when Maine imports bait fish from, for example, the Pacific Coast into Maine, you would have the same issue in that scenario. The reasoning we are different from that net penning is that we have strong preventative measures against parasites and pathogens, so the risk is significantly reduced and when you add in addition to that the health certification program that's why they're favorable to move forward on this.

AUDIENCE MEMBER: (Trudy Miller.) So this is just a regulation issue?

MR. HEIM: It's a regulatory issue and we're moving our dialogue with the authorities on this and

we sincerely hope it goes through because there has been a big bait challenge in Maine.

AUDIENCE MEMBER: (Trudy Miller.) I know.

MR. HEIM: And it's a fantastic resource that can help this industry, so we hope this synergy can be realized and we're working hard on doing that.

AUDIENCE MEMBER: (Trudy Miller.) Thank you very much.

MR. HEIM: The other thing I'd just like to say on the trust issue, I fully understand that and that's the reason we also have submitted our applications for independent external permit use. So, for example, the discharge we talked about briefly today and also previously has been submitted and reviewed by the Conservation Law Foundation, which usually sues companies for environmental problems and they have written a letter of support to DEP based on what they have read and the same with the GMRI in Portland and the same with the Atlantic Salmon Federation that works to conserve wild salmon populations. So that's a part of the trust building process we want to do in Maine is to say, okay, please do listen to us, but listen to the other people in Maine who have the scientific background to assess these things properly. Thank you.

AUDIENCE MEMBER: (Trudy Miller.) Thank you.

(Applause.)

AUDIENCE MEMBER: My name is Rachel Rabinor and I just moved here to Maine in July.

AUDIENCE MEMBER: We can't hear.

MR. LEE: Speak up.

AUDIENCE MEMBER: My name is Rachel Rabinor and I moved to Maine in July. This is the first meeting I've been to, so this may have been covered in other meetings, I don't know. I do have environmental concerns, but also I have concerns about the short and long-term effects of traffic. I -- first I'll express my concerns and then I'll ask you questions. Okay. So the thing is how much traffic will there be there? Trucks leaving and where do the trucks go? I do know or believe that the roads here were not constructed for heavy traffic, so I am assuming that there will have to be road repairs. How often is Route 1, which is a cliche I think to say this, but I will say it, I think it is a life-line along the coast here, so I'm concerned about how often it's going to have to be closed for your trucks for repairs. So what size trucks will you be using and during construction how

long will construction be? How many trucks will be going on Route 1? Are you going to be closing it down? And then once you are producing your product, again, how many trucks and what are you planning to do about the roads?

MS. RANSOM: Hi. Thank you for coming and participating. It's not always easy to do that as a newcomer in town. I wanted to let you know, first of all, traffic is primarily a concern that will be covered in detail in the city planning meetings, so oddly enough it's not a key component of the state application process, but it figures highly in the city process, so I will give a you wide variety of numbers during that process as well. But just to give you a rough idea, we have conducted a traffic study where we look at traffic counts as the existing situation right now on Route 1 and out on Perkins Road and at various intersections and we look at the facility's operations and say what's the impact of the increased truck traffic due to their operations. And bottom line is there is not a lot of impacts because there is not a lot of truck traffic and because the operation is primarily growing fish, you have a little bit of product that leaves and a little bit of feed that comes in and you have the employees

which will be between 60 and 100 employees that come to the site, but the impacts are not significant, so I think in general you're not going to feel those impacts strongly. The thing that I think people are going to recognize the most will be during the construction phase in the early part of the construction as we talked about earlier, when you build a pipeline you have to cross Route 1 with that pipeline and in order to do that you have to alter the flow of traffic on Route 1 during the months that you construct that. And the plan is to actually build a small bypass, the road would be diverted up onto the water district property so that the two lanes of traffic can continue to flow in, you know, a lane in the northbound and a lane in the southbound direction while the work is being done in the actual part of Route 1 itself. And then once the work has been -- the pipeline has been laid through on Route 1 that part would be repaved and restored and the bypass section would be closed and you'd go back to going back and forth on Route 1. And that's a bit of an over simplification. If somebody is interested in getting more details, we do have people here that can help you with that, but I do encourage you to come to the city planning process as well where we're going

to try to cover that in a lot greater detail. We have an independent traffic engineer who was hired as a consultant to the project to conduct that traffic study and there will be a thick report as part of that application that will cover some of that for you. Hopefully that helps.

AUDIENCE MEMBER: (Rachel Rabinor.) Okay. It does, yeah. And so then can you just tell us how many trucks when you're in production will be leaving daily?

MR. HEIM: I think we have the maximum of 16 or 17.

AUDIENCE MEMBER: We can't hear.

MS. RANSOM: A maximum of 16 to 17 per day.

AUDIENCE MEMBER: (Rachel Rabinor.) And then the report that you're telling me to check on you've concluded that there won't be problems with heavy traffic heavy trucks on the road on Route 1?

MS. RANSOM: It's similar to the size vehicles that currently go up and down Route 1, so the added impact of an additional 16 trucks isn't expected to take -- I want to say there are something like 9,000 vehicle trips per day existing right now on Route 1, so the additional 16 to 17 truck trips are not anticipated to have a significant impact.

AUDIENCE MEMBER: (Rachel Rabinor.) Okay. Thank you.

MS. RANSOM: You're welcome.

AUDIENCE MEMBER: My name is Jamila Levasseur. I've just got something quick. You say in your initial presentation you said your goal in raising these fish is to provide sustainable seafood and I don't believe there is anything at all sustainable about this project, but you don't mention the profit is obviously a priority. It has to be. Can you tell me why you chose to register and incorporate in the State of Delaware, which is not where you're raising your fish instead of here in Maine, the state that you claim to love?

MR. HEIM: I think will you find companies throughout the U.S. who register in Delaware for many -- a great many reasons because it's a favorable state to be registered in as a business. What you then do is you local register your business where you are actually doing the business. This is very common among companies all over the U.S.

AUDIENCE MEMBER: (Jamila Levasseur.) I'm very aware of that.

MR. HEIM: So and that's typically if you go to legal counsel in the U.S. they will often

recommend you to do this because they have favorable conditions for setting up a corporation.

AUDIENCE MEMBER: (Jamila Levasseur.) Okay. Can you be a little more specific about how -- what those favorable conditions are and how that impacts the State of Maine?

MR. HEIM: It doesn't have any impact at all. It's a matter of ease of procedures and ease of registering a company in the state, which are favorable. I don't see any impact at all in terms of doing business in Maine. It's a U.S. registered company. So obviously companies in the U.S. can be registered in any state and can do business across any state in the country and so I think every business needs to consider what's the best option for them.

AUDIENCE MEMBER: (Jamila Levasseur.) Yeah, of course. I really hope that at some point we can hear from a corporate lawyer or a lawyer who has experience in corporate law who perhaps has a different view of this matter because you are trying to set yourselves up as a corporation that's different that's putting the environment and putting sustainability first and yet you're going to be registering in a state where you're not raising your

fish. I've got some serious questions about that.

MR. HEIM: Okay. I respect that. Thank you.

(Applause.)

AUDIENCE MEMBER: Hi there. I am Jackie Cassida. So I'm going to be your little neighbor and so clearly that would mean I do a lot of research and a lot of reading. And I have to say with all of the research that's been done and all of the work that's been done there has been a tremendous amount of work from our city council and from you and I really have a lot of gratitude for a lot of what you've done especially in addressing the concerns that we've had preserving the land around our property, the trail, the green buffer zones. Actually, a lot of my questions have already been answered. So my one question that I have, you were talking about 100 percent use of that valuable product, the fish, and you talked about some of the cutoffs. As far as the waste goes, I know that there is some potential business there. Can you talk a little bit about that part of it as far as, you know, I know that it's going to be packaged up and driven away. What then?

MR. HEIM: So actually one of the first things we did was the study in New England in terms

of downstream waste resource industries that can be potential business partners. So what we concluded is there is a significant potential and there will be more. So typically what we have is a fish processing waste and that's being chilled or frozen. The one that we really hope will come to a conclusion is the lobster industry synergy because I think the State of Maine will benefit greatly from that. Beyond that, you have a large pet food industry, many other types of buyers. It's a high value protein resource, which currently the only available solution that's been used for the most part for the seafood industry in Maine is composting, which in our view is a waste of resources. So we've been reaching out broadly and see a great range of opportunities to sell this product and to put it to reuse in a valuable way. The other part is the filtration, the sludge that we dewater and then ship out. We have biogas arrangements that we can pursue and also fairly concrete solutions there. You can also compost, but that's a waste of resources in our view. Finally, we are in the process of looking at a micro-algae project that would produce high grade organic algae with one of the leading experts in the U.S. in algae production and if that it comes to fruition we hope

to be able to locate that in Waldo County as well with additional jobs for this county. So there is a number of different ways we can proceed on this.

AUDIENCE MEMBER: (Jackie Cassida.) Thank you. And I just, again, want to say I'm looking forward to being neighbors and also maybe talk about that green buffer in the back of my garden.

MR. HEIM: Okay.

AUDIENCE MEMBER: (Jackie Cassida.) It will be up for discussion, right? Thank you very much for all of the information, I appreciate it.

(Applause.)

AUDIENCE MEMBER: Hi. I am Diane Braybrook and I live over the bridge in East Belfast. When I go over that bridge, what a view. I've had a lot of accidents almost just because I drive this way. And what do I always see? I see Front Street Shipyard and I'm always so happy to see that they came to Belfast and they made Belfast a better place. I am so excited about you coming to Belfast and making Belfast a better place. I have no qualms --

(Applause.)

AUDIENCE MEMBER: (Diane Braybrook.) -- about your licensing. I think you have done your research, your due diligence far beyond what could

ever be expected. When Front Street started, I don't remember them being put under a microscope the way you have been, but they are there and they are a bonus to Belfast. So in my vision you are there. And tourism is one of the main sources of income in Belfast. I would love to see this be a destination for people to come to. Among all your rules and regulations and licenses, how open will you be able to be to welcome tourists, education groups?

MR. HEIM: I'll take that one as well. That is actually a part of -- we touched upon this in a previous meeting in terms of how can we give back to the community. So and it's also been clear that the town wants to preserve the water district building, so we combined sort of the idea of a visitor educational center for seafood with that existing building structure and also adding an outdoor salmon viewing pool so the public can actually come and see. So what we're doing there is we're giving the easement to cross our property to the trail system. We're adding a visitor educational center that, for example, also in low season could be a great destination for school kids and classes. And --

AUDIENCE MEMBER: (Diane Braybrook.) As a former educator --

MR. HEIM: Yes.

AUDIENCE MEMBER: (Diane Braybrook.) -- I love that idea.

MR. HEIM: And so we have also actually mentioned this to Duck Trap in terms that maybe we can do something together there and so that's a possibility. And if there is interest maybe we'll end up selling smoked salmon for people who go hiking. And I know our neighbors are producing blueberries, so maybe we'll team up with them as well, I can see this. So but we're going to be looking for input also into that project. I want that to be a community focused project that can give something back to the community.

AUDIENCE MEMBER: (Diane Braybrook.) I think it's so exciting what can happen because of you being part of Belfast. Thank you for being here.

(Applause.)

AUDIENCE MEMBER: Hi. My name is Phyllis Coelho and I am from Belfast. I wonder -- as far as I know you haven't decided on the feed that you will be giving the fish and my concern is how you'll guarantee that the feed will not contain GMOs and other contaminants wildly found in soybean and corn.

MR. HEIM: So I can comment on that. Beyond

that, I think we have an expert from the feed -- a veterinarian from the feed industry here today, so he might be able to shed some light on this as well. The reason we're not choosing our feed yet is because, first of all, we're over a year away or a year-and-a-half away from using any feed and we are seeing a fantastic interesting development in this industry right now. The last months have been full of news about innovation in feed ingredients and the reason this is happening is really because the industry is growing so fast that feed industry needs to innovate in terms of sustainability and sourcing of ingredients. So just in the last months when we were in Boston last week at the seafood expo down there too also you see a whole new range of micro-algae products, the first insect meal ingredients are into the market. So all of these developments are happening rapidly right now and that means that we will have other choices one year from today than today in the market and we want to be there making the right choices when we need our feed basically.

In terms of you're addressing contamination issues, would you like to comment to that, please? You can introduce yourself.

MR. RAMIREZ: Hi. Thank you for the question. I work in a fish food plant company and I can tell that all of the tests that we do to the raw materials are very intense. All our vendors are certified. We clearly test for PCB, heavy metals, any contaminant that can be in those raw materials. If we find anything, the raw materials are rejected. After we process the feed they are tested again and also tested for bacterial contaminants like salmonella that's a clear concern. All of the feed that comes in is made in Canada. That means that we also need to meet all of the EPA requirements and CFIA requirements to grow the corn. CFIA is the Canadian side and they signed all of the permanent documents who allow the feed to come to this country. In terms of raw materials, all raw materials are vegetables or animal proteins or fish meal are highly certified and tested many times.

AUDIENCE MEMBER: (Phyllis Coelho.) Non-GMO?

MR. RAMIREZ: No.

AUDIENCE MEMBER: (Phyllis Coelho.) Guaranteed?

MR. RAMIREZ: As far as I know, yes.

AUDIENCE MEMBER: (Phyllis Coelho.) Thank

you.

AUDIENCE MEMBER: I'm Steve Hutchings. I've been a career educator for 40 years. I've lived here for about 45 years and I've taught environmental science to local students for that time. I'm currently teaching at Medomak Valley and I have Friendship kids. I have about 20 kids that are full-time lobstering. They're going to be very pleased about the lobster bait. I'll try to keep them from driving up here tomorrow because they would. My point is that is my perspective. My perspective is kids, all right, and I don't hear anything about kids. And I've got two grandkids living at home. They're 16 and 18 and for 35 years I've been teaching a lot of your kids. I've watched them graduate from high school, some go on to college and they leave and you get to see your grandkids once a year maybe or once every couple years because they got good jobs elsewhere. Well, the jobs are starting to be here now and that's all I care about to tell you the truth. I trust these folks. They're good. I trust our city government. I trust our state government. We need jobs. We need opportunities for kids. We need this to be an international town and it's going to be and that's going to draw other

companies.

(Applause.)

AUDIENCE MEMBER: (Steve Hutchings.) And my 16 and 18 year old grandkids are going to stay here and they're going to be able to afford taxes and that's the issue that I care about. Thank you very much.

(Applause.)

AUDIENCE MEMBER: Hi. My name is Kathryn Shagus. I live in Belfast. And I have -- I would just like you clear up some things that seem a little inconsistent especially about the scale you have. You keep saying that you have all of the experience, but, you know, the plants in Norway 1,200 tons and 4,200, this is going up to 33,000 tons. You also say, well, we have, you know, decades of experience, which I understand that you have lots of good technical people, but it's -- it's almost like going to the moon. It's almost like saying we've got the eggs, we've got the milk, we've got the flower, we've got the sugar, but we've never cooked the cake before. And I think that my concern is the risk to the City of Belfast, which I understand is already put in $240,000 promised in start-up costs plus countless man hours. We've asked before why -- if

you so care about the environment, why is it on not on a Brownfield site as you are doing in Humboldt County? The last time I asked this question you said we must have it on fresh water. I -- it seems to me that there is an awful lot of risk that the city is bearing, yes, it would be wonderful if it was really green, if you were really recycling your waste, if it was not bad for the environment and if it offered jobs and opportunities for young people, but basically who -- why should this be trusted?

(Applause.)

MR. HEIM: Well, I think they're really good questions, so thank you. And I think the important thing is everything we develop and build is modular, so, yes, we are going up in size in Belfast, but it's like adding more modules of the same standardized concept. So it doesn't mean that we're building one huge tank, we're building many medium sized or larger tanks next to each other basically replicating them. So the first system is identical to the last system and we're doing it in a phased manner so this is all about standardizing and replicating designs in the end. So, yes, it's bigger than we've done before, but it's, again, replicating the same standardized designs and improving them every time. So, for

example, the picture you saw from our Norwegian facility is a vast improvement beyond the one we did in Denmark. And the one we're doing here in Maine is a vast improvement, again, from what we've done in Norway and that's really where this is going with the innovation and as we are also stacking more and more experienced people who have built many of these farms before. I think it's a very good question and that's why I just want to explain very clearly everything is modular. We're just multiplying the same thing over and over again basically.

AUDIENCE MEMBER: (Katheryn Shagus.) I appreciate that --

MR. HEIM: Okay.

AUDIENCE MEMBER: (Katheryn Shagus.) -- but it still doesn't really answer the question. It doesn't really answer the concerns. It doesn't answer the environmental concerns --

MR. HEIM: Okay.

AUDIENCE MEMBER: (Katheryn Shagus.) -- and who is taking -- are you taking the risk if things or is -- I mean, there is a -- Webster City, Iowa had a huge, you know, the giant fish farm that was supposed to -- sustainable and everything the city was left holding the bag. They're -- corporations don't

always pay their taxes. They don't always -- you look at -- there are a lot of examples. There is a lot of concern here and I don't think we've gotten really good answers.

MR. HEIM: In terms of the wastewater treatment you have probably hundreds of companies in the U.S. who can build the wastewater treatment plant that we're building. This is not a unique technology for us. So that's why we're also being clear that, for example, one of the major systems are delivered by Mitsubishi which is a global supplier of wastewater treatment systems, so this can be reviewed objectively by expert resources and looked at as well. But I think it's good you ask questions and that's fair, I think so, and we have put a lot of stake in this too. We have invested $6 million in the state without any permits so far, so that means that if we didn't know what we were doing our investors would be pretty stupid. So I think maybe at least you can see that as a reflection of our commitment to Maine that we're actually investing heavily because we have high confidence we are able to do this.

AUDIENCE MEMBER: (Katheryn Shagus.) And my understanding is you have family investors as well as

other investors and --

MR. HEIM: We have --

AUDIENCE MEMBER: (Katheryn Shagus.) I -- mean, you stand to -- you and many other companies that want to do this right now stand to make an awful lot of money, but there are a lot of companies trying to do the same thing at the same time and some will fail and some will succeed.

MR. HEIM: Yes, and that's maybe the difference between us and start-ups. We have already built three facilities and our engineering staff has built countless facilities before that.

AUDIENCE MEMBER: (Katheryn Shagus.) At a much smaller scale.

MR. HEIM: Yeah, but they're getting bigger and bigger and the knowledge -- that's what happens in many industries, they grow and they scale and that's a natural part of how many companies in the U.S. is developed as well. They started somewhere and built from there. And I can't speak for every U.S. company, some -- it's clearly some companies have probably done better than others and some are probably more ethical than others and so on and I can't really stand by what they have done. I have to speak on terms of our company and what we are good

for basically.

AUDIENCE MEMBER: (Katheryn Shagus.) Okay.

MR. HEIM: And so I think you have to judge us by our actions and what we show in terms of experience and our team and that we actually have already three facilities in operation. We are the only land-based company in the world today with different facilities in operation in the presence of three countries, so we are quite a bit different from start-ups in this industry.

(Applause.)

MS. RANSOM: I'd like to just add one more comment regarding the financial piece. As part of a SLODA application a company is required to show financial capacity for the project, so there is a substantial amount of documentation that will go into the state and be reviewed by the state as to their capacity to actually perform what they say they're proposing. So just as an added layer, I mean, obviously Erik has spoken to why it wouldn't make sense for him to go forward if he didn't think he could succeed, but there is actually a governmental check on that so if you're interested this will also be part of the application process. Thank you.

AUDIENCE MEMBER: Hi, there. Lou MacGregor.

Thank you for the opportunity. I wish I could support the project. I get up every morning wondering if this is going to be the day when I'll feel like I can support it and -- or will this be the day that we just leave town, but it hasn't happened yet. I do have a couple of questions. You've regularly said in these PIMs and elsewhere that you're being transparent through the Belfast process. In that case, why won't you release the Gartley and Dorsky survey of Belfast Bay or at least part of the bay that you commission? Is it because survey shows effluent pipe crosses the littoral zone and one or more of Belfast/Northport residents who don't want you and won't give you permission to cross the zone or is it because no one in the area will permit and you must take a long surreptitious route?

MS. RANSOM: This is the Dorsky survey that you're looking at in this figure.

AUDIENCE MEMBER: (Lou MacGregor.) Okay.

MS. RANSOM: And this shows, I mean, and, you know, obviously it's simplified for the presentation, but the application materials will have a full response to all of the questions of the January 22 letter from DEP including copies of the information that we're providing showing title, right

and interest --

AUDIENCE MEMBER: (Lou MacGregor.) All right.

MS. RANSOM: -- to the land for the pipeline.

AUDIENCE MEMBER: (Lou MacGregor.) Thank you.

MS. RANSOM: You're welcome.

AUDIENCE MEMBER: I'm Susan Cutting and I live in Belfast. You state -- I just want to clear up some inconsistencies. You state that the lowest carbon footprint would come from local net pen production or wild salmon fishing, but a recent detailed report says that because of the huge energy footprint of the RAS systems the lowest carbon footprint with the lowest accompanying environmental footprint would be to use existing net pen facilities in the deep ocean Scandinavian waters and to ship frozen filets or whole fish in container ships to the U.S. And I want to follow-up on the question about climate change. I don't think that this is really about feeding the world for you, is it? Because -- wait, let me -- well, because what we have demonstrated here in Belfast is that we have an amazing local food movement. We have a co-op and

our, you know, two different farmer's markets and there is a lot going on here and we have a lot to show and share and that is a low carbon footprint. In this day and age we can't afford to do this to our children and future generations. Your industry is a huge facility that is going to have a huge carbon footprint.

AUDIENCE MEMBER: Here here.

AUDIENCE MEMBER: (Susan Cutting.) And so I'm -- I ask that you stop referring to it as a low carbon initiative because it it's not.

MR. HEIM: Okay. Frozen salmon shipped from Norway has about the same footprint as our fish in Co2, but I agree with you, you definitely reduce your footprint with frozen product. So essentially if you wanted to reduce the Co2 footprint of salmon consumption in the U.S., stop importing fresh seafood. Airfreighted. That would be your first step because you have a much lower footprint from frozen seafood from fresh seafood. So then there is the consumer choice if consumers are happy with frozen products. So that's -- that's an interesting discussion. Besides that, U.S. emissions of Co2 increased by 3 percent last year and so if you look at the big picture in the U.S. where the real issues

are on Co2, I think we're not the place to start. There is a much bigger discussion going on that really needs to be taken seriously in this country and we definitely want to be a part of that discussion as well. But in the end, if you look at the amount of fish produced with this footprint you will not find any facility in the world with the footprint efficiency that we are providing and that's because we have gone through extensive design processes to be very efficient on footprint here.

AUDIENCE MEMBER: (Susan Cutting.) But it doesn't beat local food. It doesn't go -- so starting -- a first process is to be to not choose this model.

MR. HEIM: So I -- I actually shop at the co-op and I really appreciate it and we also shop local organic and I think that's a great product as well. The problem is that if you are going to put feed in total use population organic small scale farming cannot do it because of yield, so you need a combination. So my point is you need both. Yes to both. It's not an either or question, so -- but that's a very interesting debate that this country should have in terms of future food systems and the sustainable issues around them because it is a very

important issue. So thank you for the question.

(Applause.)

AUDIENCE MEMBER: Hi. My name is Anne Saggese. I'm from Belfast. And I want to say this has been super fascinating to watch this project develop, so thank you for the expansive opportunity you've given us to watch it happen. I know it's been a rocky road sometimes. I've spent the last 30 years in local food production, so I would like to back-up Erik in saying that small family farms can't feed the world. It is a big part of the solution, but it is not the solution and we need to be thinking about technologies like this to fix that. So my question though was not -- I'm nervous as anything. I don't know why. -- not all of you are Nordic employees here, correct, that spoke tonight? So those of you that are not Nordic employees, what's your background? What's your expertise? You know, we saw a lot about there was some science stuff that went right over my head, so why should I be believing what you say?

MS. RANSOM: I'll start with that. Here we go. So this slide that Erik put up earlier in the presentation showed you a variety of the different partners that have been involved in this project so

far and there are others that aren't even on the slide. We are a variety of scientists, engineers, architects, landscape architects that have been brought in to help on the aspects of the project that are many that go into this application.

So, for example, I won't try and speak for everybody, but SMRT is from a large firm in and it's composed of architects, landscape architects, and engineers that have the capability to design buildings, roadways, foundation systems and the kind of things that you'd have on any sort of building process not just specific to aquaculture.

Woodard and Curran has been brought onto the team because they have folks who are experienced at looking at things like the pipeline and how could you design a pipe system of that length and into that depth of water.

I represent Ransom Consulting. We are engineering and scientists who helped with things such as the stormwater design. We've looked at groundwater. We are overall looking at the permit application process and making sure that that's complete. And, you know, the individuals standing up here tonight are one of a team of anywhere from a small group to 100 or so people at each company have

been involved in some aspects of this project.

Gridworks Consulting is up here to -- a partner that has looked at some of the energy consumption for the facility and some of the questions we've had tonight about how do we efficiently use energy and do that in a manner that keeps the carbon footprint down.

Ramboll is another environmental consulting firm and engineering firm that's been hired to actually provide independent sort of outside review, so when Ransom or MMA come up and presents some of our groundwater modeling or discharge modeling that's one firm's opinion of how it can be done and Ramboll has been hired to look at that and say, okay, did they take the right approach, is there another alternative way we could have done that.

Cianbro obviously is something that probably a lot of you are familiar with, you've seen their signs and trucks around. They do a lot of construction. They have a lot of great construction experience. And they've been looking at this not only as to how do we build the pipeline, but it's what we're engineering something that's actually constructible. There are easier ways to construct things than others and we don't want to go through a

permitting process to permit something that ultimately a contractor comes in and bids on and says I can't build that, you guys are crazy. So they've been brought in early to the team to make sure that what we do has some experience behind it as well.

Drummond Woodsum is, like it says, attorneys. They're here to make sure they review this for completeness and thoroughness and make sure that the application meets the standards it needs to.

Kennebec River Biosciences has been involved in helping with some of the actual, you know, integral pieces to the fish process itself, how do we grow these fish successfully.

And there is numerous people that didn't make the slide. We've a got noise consultants, we've got archeological consultants, we've got wetland consultants, but each of those are represented by a large firm with resumes that in many cases have 20 to 30 years of experience behind them. All of that information actually goes into our application process. We have a section of the application that will be resumes and project descriptions to basically show DEP that the Nordic team has the experience to do what they say they're going to do.

AUDIENCE MEMBER: (Anne Saggese.) How many

of these companies are in Maine?

MS. RANSOM: I believe everybody that I've named tonight except maybe Gridworks has a Maine office.

AUDIENCE MEMBER: (Anne Saggese.) Thank you.

MS. RANSOM: You're welcome.

(Applause.)

AUDIENCE MEMBER: Hi, there. My name is Michael Ray. I live in Lincolnville off the map or of your map, but still interested in what happens in the area. I've got a question, but as an aside I just wanted to thank you on a presentation. I used to be on a little planning board in a little town and I always get this geekish thrill out of seeing applications that are comprehensive, even overviews of applications and I like watching people work too. But what I didn't hear, and correct me if you went over it and I missed it, what might -- what plans do you all have should your application be approved and you get the permits and what not for if some relatively significant remedial action has to take place, stormwater, effluence, you name it. Have you put money aside in a fund, something above and beyond fines, what kind of provisions might there be with

the DEP? Or maybe -- maybe that's entirely --

MS. RANSOM: I can start on some of that. When I talked to you about groundwater, for example, we talked about the fact that the -- that we set action levels and we come up with an action plan. So what might that look like? So let's just say our model predicted that somebody's well was going to have 10 feet of drawdown and we start up a facility and we see that there is more than that. One of those action responses might be depending on the nature of the response that we find a different way to use water so we don't cause that drawdown, so that may be they increase the salinity in their tanks as a response to observed water drawdowns. Let's just say maybe we're not having an impact on somebody's water quantity, but let's just say they develop an iron problem that they didn't have before, our mitigation for that measure might be we'd give them a water treatment system. So each part of the application looks for the applicant to have a way to monitor for problems that could occur, prevent them from occurring or stop them and mitigate and that takes many shapes and forms and that's water, that's stormwater, that's wetlands, that's design, the things that don't go as planned because, let's face

it, you know, you can model and develop your engineering and then there is what happens and so the state protects and the applicant protects to make sure that they can maintain a good project going forward.

AUDIENCE MEMBER: (Michael Ray.) Yeah, well, actually what I'm asking, and maybe this is something that the ordinances don't require you to do, I don't know. But, no, I was thinking of something, well, not post-apocolyptic, but if something major were to happen, okay, monitoring is good, paying a fine is good, mitigation is good, but should there be something larger that happens. We find out 35 years from now that Penobscot Bay is spoiled, do you -- is there some sort of plan or commitment to clean-up monetarily? Like I said, maybe the ordinances don't require this.

MS. RANSOM: I mean, there is Maine law that they'll have to uphold. And there will be ongoing monitoring so that you know if anything is going on, so that, you know, the premise behind that is so the apocalyptic scenario doesn't occur that you've nipped it in the bud before you get to something like that. So, I mean, all of these applications have a robust monitoring program that follows so that the state and

the applicant and the community all have the benefit of knowing if things are going according to plan.

(Applause.)

MR. WOODWARD: Jay, could you please try to get out of line so I can use the mute button?

(Laughter.)

AUDIENCE MEMBER: (Jay Davis.) You don't want me to do that, but I could. My wife and I -- I'm Jay Davis from Belfast. My wife and I just came back from a trip to Norway to visit our daughter and we went to Frederickstad to see Nordic Aquafarms in real life and it was an interesting experience. One of the things that struck me was outside the finished building where I understand from your office in Belfast you're -- just the -- the fish are just about to go into this building, there are 40 big round like round hay bales in Maine stacked up outside the building and I'm thinking they're not going to feed hay to these fish.

(Laughter.)

AUDIENCE MEMBER: (Jay Davis.) But you are feeding something to the fish in Norway, what is it and is what you're feeding them subject to any restrictions in your permit to operate in you -- in Industrial Park in Frederickstad?

MR. HEIM: So I have not the benefit of being in Frederickstad actually in six months since I moved here. So you're saying there is hay bales outside?

(Laughter.)

AUDIENCE MEMBER: (Jay Davis.) No, they look like hay bales. Plastic covered hay bales.

MR. HEIM: Yeah, it's probably biofilter material that's been built into the central biofilters. So that's a part of the final just the wrapping up the process of the facility, I would assume without having seen it and so that's the answer there. And so in Norway the feed formula we use there is a pretty standard type of feed used in the industry in Norway. It's specialized for RAS production basically meaning that it has natural binders that keep the feed together longer than you would see in the ocean, so the -- all of the pellets are consumed because one of the things you don't want in the systems is to have waste feed floating around the system because it can give you water quality problems.

AUDIENCE MEMBER: (Jay Davis.) So are they grain-based or?

MR. HEIM: It's a combination -- so, yeah,

so what you've been seeing basically in the last 10 years is that the industry has gone in the direction of where it's significantly increased in plant protein, the product. If you go 10 years back most people had 40 to 50 percent fish meal that's significantly reduced today as research has brought forth vegetable proteins into the product and then in addition to that now we're seeing the development in the market now with new alternative ingredients that can also replenish/replace, for example, fish meal. They can also add Omega 3s and 6 to the product without fish meal, so this is the trend that we're seeing in the industry right now. So it's basically response, you know, I think the people in the industry are responding both to the producers and the consumers in terms of the choices they want and this is the clear trend that we're also behind is that we want to see more and more movement towards all kinds of sustainable non-GMO. That being said, GMO is not an issue in Norway, but it is in U.S. and a clear trend towards more and more sustainable sourcing of all ingredients in the products.

AUDIENCE MEMBER: (Jay Davis.) So is what you feed the fish part of the permit application and part of the permit approval?

MR. HEIM: Not in Norway. You need to have accounted for in terms of your residual discharge after treatment so you know exactly what nutrients are going to be discharged. Of course in terms of the food authorities you need to just make sure that you're feeding your fish with call it an approved feed. That being said, the largest feed companies in Norway are, you know, highly regulated as well. So you can feel some level of confidence in terms of the regulation process just like the U.S. on these.

AUDIENCE MEMBER: (Jay Davis.) Okay.

MR. HEIM: I don't know if that -- if you have more specific questions regarding that.

AUDIENCE MEMBER: (Jay Davis.) Well, I'm trying to get so that people here can understand what you're going to feed the fish so we can understand what is going to happen to the bay.

MR. HEIM: Yup.

AUDIENCE MEMBER: (Jay Davis.) And I know that you're feeding fish in Norway --

MR. HEIM: Yup.

AUDIENCE MEMBER: (Jay Davis.) -- and I'm just trying to find out what it is.

MR. HEIM: So to reiterate again it's a combination of vegetable protein and there is animal

protein, mostly fish meal and fish oil in Norway. Here in Maine, I'm hoping to reduce that even more and maybe in the future eliminate fish meal with the ingredients we see coming into the market today. So that's sort of the end goal for me to get to the new types of ingredients that really have a different profile and sustainability. So beyond that, like it was said, Skretting, we also have a partnership with Skretting in Norway. They do have very rigorous testing and rejection of any ingredients that could conceivably have contamination. So there is a very rigorous process in the industry interest in terms of these kind of issues.

AUDIENCE MEMBER: (Jay Davis.) Thank you.

MR. HEIM: Yup.

(Applause.)

AUDIENCE MEMBER: My name is Bob Adler and I promise, Lee, that I will behave too. I have a couple of questions related to the whole issue of risk. One, recently I read that the marketplace for your product is likely to be far more demanding than state regulators are and I wonder if you can speak to whether the marketplace is placing stronger demands on you than regulations, for example, Whole Foods or the consortium of co-ops. That's one kind of risk

I'd like you to talk about. The other on is having misspent most of my career in the property casualty insurance industry, I know it is an industry that is extremely risk averse despite what its intended purpose is. So particularly with new technologies, property casualty insurers are very wary of providing coverage, so I'd like you to speak to your experience in other countries, but so far in terms of insurer's willingness to insure you for your work because they tend not to like risk at all.

MR. HEIM: So I have a long career behind me as an insurance executive.

AUDIENCE MEMBER: My sympathies.

MR. HEIM: That's what I did before I produced fish actually. First of all, I think you're -- I think you're right about the marketplace being a driver. I think if we, for example, if you look at the -- we talked about the feed industry, I mean, consumer trends and expectations are key there. I think also producer's expectations and trends are key. Sometimes one is more on the offensive of pushing certain things than others, but I think, for example, if you look at the amount of nutrients we remove per pound of fish no other facility is even closer internationally to doing what we're doing.

It's beyond other permitted facilities in the U.S. by far. So in this case, I think what we are doing is trying to set a new standard in the industry saying when these farms get bigger you need to get cleaner. And that's -- I can't really speak to the permitting system in the U.S. exactly where they're going to be in the future, but what I can say is a lot of the applications we have reviewed -- actually permits we have reviewed don't even list nitrogen and phosphorus, so I think, you know, this is going to become more and more important in the future and we have said clearly for the State of Maine set strict standards but be predictable, that's what businesses need.

AUDIENCE MEMBER: (Bob Adler.) So can you speak then to like the Whole Foods --

MR. HEIM: Yup.

AUDIENCE MEMBER: (Bob Adler.) -- are they setting standards for nitrogen that regulation is not?

MR. HEIM: So the Whole Foods has standards that they set to have other certification agencies also like BAP, ACS, ACME, all of these are certification standards in the market that is driving standards. They differ. Some can have very specific

requirements, for example, to feed, others cover that and perhaps other things like buyer security procedures, other things that relate to the sustainability of your production. I think consumer sort of trends and demands and expectations feed into that. And I think also some producers feed into that that really want to see standards in the market develop. We're trying to do that in a few areas. And then you have also of course producers who don't want to do that, so you'll probably find a whole range in the industry. So we certainly do look -- monitor very closely all of the trends in the market. For example, one of the big differences for us as a Norwegian company coming here is the question of GMO. I mean, GMOs aren't used in feeds back home. Here it's a big issue, so certainly there is a difference between markets as well that are really important to know and understand, so.

AUDIENCE MEMBER: (Bob Adler.) What about the insurance industry and its willingness to insure you?

MR. HEIM: Yeah. So all of our facilities are insured to put it that way. So I think the issue of insurance it's more difficult for start-up companies without any track record to get the best

coverage in the market, they will struggle more. Established players who have facilities and operations will have a significant benefit in terms, again, like you say it's a question of risk, can they operate these facilities, do they have the track record as showing that, for example, they have the environmental profile in order in terms of the authorities and everything. All of these things they will do in a risk review with the company. At the table is this, like you said, companies who basically have their act together have a fairly good chance of getting a decent cover, companies who do not will struggle.

AUDIENCE MEMBER: (Bob Adler.) And you have been perceived as a company who has its act together in the industry?

MR. HEIM: All of our farms are insured, yes.

AUDIENCE MEMBER: (Bob Adler.) Okay. Thank you.

(Applause.)

AUDIENCE MEMBER: Good evening. My name is Ethan Dubrow. I live in Northport and my question is also for Mr. Heim. It picks up on the last question that was asked perhaps, maybe not. But in looking at

the presentation tonight on slide number 76 that showed the watershed area on the McDonald Morrissey slides. I live well within that and I have a drilled well and my question is that on slide number 74 it said that the water usage was not anticipated to influence the use of domestic wells in the neighboring areas. Great. But if it does, and this is, and I don't know if this is and action plan question or an insurance question or just a question for Mr. Heim, will Nordic Aquafarms pay to connect us to a city water supply if our wells become unusable?

MR. HEIM: Yeah, I think it's a fair question. Number one, with continuous monitoring we will see every small change in the aquifer on an ongoing basis. So we -- if we saw any kind of negative change that goes beyond what all of the modeling and testing we've done now, we would know that very early on if there is slightest changes. So what options do we have? Number one, our systems are configured to operate on different salinities, so we can regulate the fresh water use in our facility, that's one thing, so we can respond to a situation if necessary. Secondary, if you should have a worst case scenario like you're asking me about the question is yes -- the answer is yes.

AUDIENCE MEMBER: (Ethan Dubrow.) The answer is yes, Nordic Aquafarms --

MR. HEIM: We will stand up for our neighbors.

AUDIENCE MEMBER: (Ethan Dubrow.) You will?

MR. HEIM: We always have and we always will.

AUDIENCE MEMBER: (Ethan Dubrow.) So if our water supplies becomes unusable you will connect us to another water supply?

MR. HEIM: We will make sure have you a solution, yes.

AUDIENCE MEMBER: (Ethan Dubrow.) Okay. Thank you.

MR. HEIM: Yes, we will make sure of it.

(Applause.)

MR. WOODWARD: We are running short on time, so we will address the three people that are in line and there will be no additional people lined up for questions so that we can finish near the hour of 9. Thank you.

AUDIENCE MEMBER: I'm Natalie Charles and I live in Belfast. I haven't heard any answers to questions about fish pheromones and kairomones, which have been found to have a profound effect on the

behavior of wild salmon, lobster, sea lice and other organisms and I'm hoping that you can address this with respect to the discharge whether -- or is any of that going to get out?

MR. HEIM: I believe we have one of the leading experts in the U.S. here today; is that correct?

MS. HAMLIN: Hi. Heather Hamlin, so I'm an endocrinologist dealing with marine species and so I guess I'm not quite understanding your question. So what do you -- what do you think pheromones and kairomones from salmon from this facility will impact?

AUDIENCE MEMBER: (Natalie Charles.) It can change the behavior. It can change like reproduction and make -- I forget specifically, but it mixes them up and they just don't function.

MS. HAMLIN: Yeah, so in this particular case, so these are things that are present in all different fish in all different species, et cetera, so there is really no evidence that these particular pheromones/kairomones, anything from this released from the facility will impact other fish or behaviors in a negative way. Yeah, so I am happy to try and provide for you research and so -- peer reviewed

research that basically -- they're review papers in essence that will explain that this really shouldn't be an issue with this. So some of those things you're talking about can impact potentially other things, but they tend to be in much higher concentrations, so I personally would have no concern that this would be an issue in that regard and I am a reproductive endocrinologist, so, yeah. Yup.

AUDIENCE MEMBER: (Natalie Charles.) All right. I'm not convinced, but thank you.

MS. HAMLIN: Yeah, you know, if you want to email me, I'm happy to talk to you and I'm happy to send you a whole bunch of literature.

AUDIENCE MEMBER: (Natalie Charles.) Okay.

MR. HAMLIN: Yup.

(Applause.)

AUDIENCE MEMBER: Good evening. My name is Shane Flynn. I'm from Camden. I may be a little bit further away than most people here, but I just wanted to make a couple of comments and, well, one comment. Two of my questions were answered in the last few minutes. But they -- so I will ask a question with regard to water supply going forward, but before I do that I have had some experience with site location in the past. I have basically had a number of them

including two that are in this area, one in Belfast and one in Northport, and I'd just like to say that when we came here years ago a company that I worked for the people of Belfast were very open arms to us. And I know that this is a very large project for people here in Belfast and also in Northport and what I would like to say is I'd like to compliment the people of this community who were wonderful neighbors to us in the past and are doing what appears to be a really good job and asking the correct questions going through the type of diligence they should go through and I am sure and I'm confident that wherever things go that Nordic Aquafarms will have very good neighbors and people that are supportive as long as transparency exists, which I think it does.

With regards to the water supply and I know that one question was just answered for a neighbor. I mean, climates are changing and will continue to change as it always has and, you know, from the little bit that I remember on looking at this a few years back I think it's going to become wetter and warmer in this part of the world, at least that's what they think, who knows. So the aquifer will probably remain about where it is today in terms of how it recharges, but if it doesn't recharge, if for

whatever reason it's depleted significantly, does the company have plans to address that and, you know, what is the alternative? You talked about, you know, increasing the salinity and I'd like to understand that a little more.

But before I finish, I'd just also like to make one comment and that is people asked -- someone asked with regard to Delaware and why companies register in Delaware and I am not a corporate lawyer, thank God, but I have a lot of experience in Delaware and a lot of experience in that particular field and the main reason that people register there there is a small fee, fees go to this state, whatever state, you know, I think it's changed a little bit, but about 95 percent of companies register in some fashion in Delaware, that's declined a little bit in more recent years, and the reason they do it is not to avoid tax. It has nothing to do with tax. The taxes would be the same. It's done for two reasons generally, one, that Delaware has a Chancery Court. There are very few of them in the country where they deal with business law and they're able to address the law very efficiently and quickly as well. There is a ton of precedence that exists there and that's why companies like it. And very importantly, investors demand it

in most cases. They want to have companies that are registered there because in case there are questions of law they know that they will be dealt with in a place where it can be dealt with effectively and there is a lot of law. So thank you.

MR. HEIM: Thank you.

(Applause.)

MR. HEIM: So the question was related to fresh water and conceivably with the climate change situation we're seeing. In 20-30 years conceivably you could envision droughts even though many of the northern regions are expected to receive probably just as much, if not more, water. A project like us have of course our investors are asking the same question, what do you do if your fresh water disappears? And of course the way we approach this is basically a number of different avenues, but the two most resilient ones is, number one, the ability to adjust salinity in the system. The second one is desalination systems. So both are possible to implement on the sites. We have an overview of the options and the technologies, so these will be back-up solutions for the future if we should get into a situation like that. So these are strategies that we are required think about also, first of all,

from the environmental perspective for Belfast and also the operation and the responsibility we have for our investors. So the bottom line is we really do have solutions to deal with these scenarios.

AUDIENCE MEMBER: Hi. My name is Linda O'Connor and I've wanted to live in Belfast for about 30 years. I moved in last June. I've lived in different parts of the state, mostly near the coast, and I arrived just in time for you all to be undertaking a 40 acre project the size of Bath Iron Works in this lovely town. The comparison to the chicken industry that was along the river and by the bay and there were other industries there to ship -- the Shipyard coming into what was already an industrial site and doing what its done, Front Street has done a beautiful job, to the pristine area that you all have chosen instead of choosing something that is closer to the water so you don't need long pipes and that industry that's already gone left a legacy in the silt in the bay that has often caused a lot of concern about any sort of dredging with the mercury and other things. So our bay and your pipe, okay, and the effluence and I haven't heard anything about the water temperature and the fact of the -- I mean, millions of gallons become trillions of gallons

over time and the bay is pretty shallow overall and what studies have you done about what putting all that in the bay and the warmth of it and what's going to happen to the lobster industry and other things that we depend on.

MS. RANSOM: I'll try to answer that, that's a lot of questions wrapped into one. I am not sure if you've attended any of the previous meetings, have you?

AUDIENCE MEMBER: (Linda O'Connor.) Two or three.

MS. RANSOM: Okay. So then you know the majority of the information we provided relative to discharge into the bay and the modeling that was done and the sampling that was done would be in the MEPDES application that has been spoken about at the previous meetings, so a lot of that information is online if you'd like to look at it. Our actual MEPDES application is available through the MaineDEP special projects website and I believe also the City of Belfast has that application uploaded on their page or link to it on their page as well. But --

AUDIENCE MEMBER: (Linda O'Connor.) That addresses temperature? Actual -- the model of the temperature change?

MS. RANSOM: The temperature of the discharge is included in there as well. I think just a real simple -- since we've kind of gone past our time limit, a simple way to look at this though is their discharge while it sounds like a big number is going into a bay that has approximately 10 trillion gallons of water in it, so that's not to say that there is not things you can measure of their discharge in that water, but it's a small amount going into a large amount. It's like a drop of water in a 5 gallon bucket. You know, I'm trying to put it into sort of tangible things you can picture, but you wouldn't expect if I took a dropper of hot water and dropped it into a 5 gallon bucket of cold water that you'd see an appreciable difference and so that's kind of, I guess, a way of thinking about it. I'm not sure I'm doing a great job of answering your question, but I think --

AUDIENCE MEMBER: (Linda O'Connor.) So why not just take care of it all on-site and put out whatever discharge as being quality water rather than putting anything called effluent into our bay?

MS. RANSOM: Because the best available treatment technology that they are using to treat this water does do that for the majority of compounds

that you -- that the treatment technology exists. So they are removing 99 percent of everything other than nitrogen and 85 percent of the nitrogen that is generated at the facility before that water is discharged. There are components that they are discharging to the bay that will be at lower concentration than what the bay contains right now, so they have got state-of-the-art wastewater treatment. I don't think they can get better than that with what's available on the market right now. That doesn't mean they can't keep improving as systems improve, but they're, you know, the information is there in that application to show you the extent that they're going through to treat that water before it's released.

AUDIENCE MEMBER: (Linda O'Connor.) The last thing I want to say is congratulations for getting our town to rezone a residential area on your behalf. Thank you.

AUDIENCE MEMBER: I know.

MR. WOODWARD: And make it a question.

AUDIENCE MEMBER: A question, okay. My question is -- it's because I really don't want Belfast to be left holding the bag, so my question is that we know that many corporations now do fail and

often leave the remnants of their companies in the towns with towns either having to pick up and pay -- pay for the remediation or what else. And I know that I -- we talked about this and Deloitte report which the city commission noted that many of these corporations are not going to succeed. They are going to fail. And so what -- and we've talked about this before, so, Erik, I think we asked you what happens if you fail and I thought what I heard you say was not very comforting. It was that you'll sell -- you'll sell your -- the property and what I see then -- and you said it will leave Belfast a great infrastructure. What I see then happening is that you have framed -- Nordic Aquafarms is so far ahead in this technology is that we're going to end up being left with some second rate aquaculture farm having to move into Belfast, so that's -- so help me out -- I don't understand that -- I don't -- I think we would feel very reassured if you would consider a surety, a surety bond, and I believe we have asked you about that just so Belfast doesn't get held holding the bag. And you've said, well, that's unreasonable, but, you know, I think that that would give many of us a lot more confidence if that was something you considered.

And the final thing is I would like to know that you won't come after Belfast to say we need more money from local government or we might move because we have a lot of corporations in Maine, including at Bath Iron Works, despite all of the infrastructure that the corporation says we're going to move if the city doesn't give us more money and the state doesn't give us more money. So can we have assurances that you are not going to let us -- leave us just holding the bag.

MR. HEIM: Well, first of all, I think they're good questions and like you said we talked about them before. First of all, I think it's important to just restate that this is a multi-phased project, so it's not like we are developing this whole site with a complete project, so it's an opportunity for the community to follow the project through its stages and obviously -- and you're thinking about the worst case scenarios --

AUDIENCE MEMBER: Of course I am.

MR. HEIM: -- right? And so our investors would be foolish to continue building to put it that way, so, yeah, I think it's highly self-regulating, this whole issue. But, again, this is why it's a multi-phased project to also build our confidence

with the community to show the community how this works and that we deliver on our permit thresholds every step of the way. That being said, you know, the benefit of also having strong shareholders they're long-term. Look at this project. It's a five to six year investment activity before they see any revenue. They are long-term in their thinking. And, you know, if challenges come up, they're not going to just leave their project and go because they're already invested and invested so much interest in this community as a part of this community. So I think when you look at a project like this I have to say, again, it's a long-term effort that's going to go into it. And the worst case scenario is that you brought up, yeah, you asked me what if we go out of business and I think my answer was is that there is a highly valuable piece of infrastructure that somebody could probably pick up very cheap or should be a steal, right.

So in terms of your question on the other and so the only expectation we have is to be treated fairly in Maine in comparison to other businesses, so that's what we're asking. So, you know, and there is a dialogue we can have with the authorities and communities about what that is and so that's sort of

where we're coming from at least treat us fair, don't put, you know, a lot of demands on us that you wouldn't put on other businesses.

AUDIENCE MEMBER: Well, it's an unusual business though.

MR. HEIM: Yeah, well, I'm sure there is also a facility being built in Bucksport and other places as well, if you pose things on us and not the other one, I think that would be pretty unfair. So I -- I think it's a matter of maybe coming to an agreement, you know, what standard should there be in Maine for --

AUDIENCE MEMBER: Can you make a commitment not to come back to the city or the state for more money should things look bad for you?

MR. HEIM: Well, I don't think there is any source in the money in the state or city.

AUDIENCE MEMBER: I hate to tell you --

(Laughter.)

(Applause.)

AUDIENCE MEMBER: I hate to tell you that General Dynamics makes out pretty well.

MR. HEIM: Okay. I'm not really --

AUDIENCE MEMBER: General Dynamics makes out pretty well.

MR. HEIM: Well, you know, our company has never gone and asked for money if we needed money.

AUDIENCE MEMBER: So I'll take that as a commitment.

MR. HEIM: What we have done is generally if there are incentives available for businesses in the state like the Pine Tree Program in Maine, we apply for those just like any other business, but I'm not familiar with a practice with a company needing money going to the state and say we need money because we don't have it.

AUDIENCE MEMBER: General Dynamics.

MR. HEIM: Oh, really? I don't know the case. That's new to me, but I don't really see that scenario happening, no.

AUDIENCE MEMBER: So you would accept TIFs and things like that though?

MR. HEIM: Well, we can probably provide free visits and so on, so.

MR. WOODWARD: Thank you.

(Applause.)

MR. WOODWARD: This concludes the question and answer period. And I tell you, I want to thank everyone who asked the thoughtful questions. We were able to hear them, they were able to be answered. It

was very respectful. Thank you very much and have a good evening.

(Applause.)

(Meeting concluded at 9:16 p.m.)

C E R T I F I C A T E

I, Robin J. Dostie, a Court Reporter and Notary Public within and for the State of Maine, do hereby certify that the foregoing is a true and accurate transcript of the proceedings as taken by me by means of stenograph,

and I have signed:

_____

Court Reporter/Notary Public

My Commission Expires: February 6, 2026

DATED: April 9, 2019