



VILLAGE OF BELLEDUNE

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February 5, 2010

To Concerned Citizens of the Village of Belledune

Subject: Belledune West Sanitary Sewer System - EIA Registration 24561-3-1219

The following is a list of community based questions and answers that needed to be addressed in the EIA process.

Note to reader: Due to the length of some of the questions in the original documents and the effort to keep this document to a reasonable amount of pages, some of the questions are not written in full in this letter but are abbreviated. Refer to the original document for a full version of the questions.

1.0 Email received June 3, 2009

1.1 If the Smelter closes, how much will that influence the charge per year?

The closing of the smelter will not impact the user rate itself because the system has to be self supporting regardless of the village tax base. It is a user pay system.

2.0 Email received on June 3, 2009

2.1 What side of the road is the pipeline going to run?

Main Street: North

Noel Road: West from Main St to civic #26, East from civic # 26 to McMillan St and West from McMillan to civic # 302

McMillan Street: East

Albert Street: East

Gagnon Street: East

Msgr. Hickey: East

Mack Street: West

Carr Street (south): North

Carr Street (west): East

Carr Street (north): North

McAlister Road

Legacy Road: West

Veteran Street: East

2.2 What will happen to the houses that are close to the shoulder of the road?

According to our survey information and the SNB ROW information, civics # 3792, 4001, 4292, 4304 and 4390 Main Street, civic #32 Gagnon Street, civic # 26 Noel Rd, civics #?? (0+080) and # 28 Msgr Hickey Lane, civic #22 McAllister Stree and civic #44 Dr.Ellis Lane are close or within the ROW. These houses will remain as is and the piping will be designed as to not disturb them. The advantage for these houses will be that the cost to the owner to connect to the system will be very low because of the distance to ROW.

2.3 What would be the depth of the pipeline being placed in the ground?

In the gravity sections, the depth will vary between 2.1 m to 5 m. In the pressure sections, they will be installed approximately 2.1m in the ground to protect them from frost. If these depths cannot be achieved for some reason, rigid insulation will be installed to protect the pipes from frost.

2.4 If there is damage done to wells by digging too close to them, who will fix the problem of the well damage?

A representative percentage of the wells near the construction will be sampled to produce a baseline data and if it is determined that a well has been affected because of the construction. The village will take remedial actions and it will be handled on a case by case basis.

2.5 I understand that the pipeline will run under Jacquet River Bridge. Would Jacquet River Bridge be able to hold the weight of the sewage pipeline? Would the pipeline be able to handle the cold winter weather, minus wind chill factor (freezing sewage pipeline)?

The Jacquet River will be crossed using the directional drilling method.

3.0 Document received June 11, 2009

Questions about future population growth

3.1 Protecting our children and grandchildren 's environmental future and accommodating future population growth. Where are all these children and grandchildren going to come from? What are his population growth predictions based on? Does he know something I don't know?

Employment opportunities are constantly being worked on and indeed some may arise in 2010 that may surprise us. The population decline is exactly what we are trying to turn around but we don't feel we can do this without a number of things including upgraded municipal services. There are no hard and fast numbers, rather the basics of creating the climate that will allow growth.

- 3.2 Where are the people of Belledune supposed to get the extra money to pay for a Sanitary Sewer System they do not want?

That depends on the person. For working people this should not impose a large burden. For social assistance recipients their assistance may actually increase to cover the cost as it is considered a utility cost. For others it will be up to them to pay this as they would phone, hydro or any other utility.

- 3.3 What variables may drive the cost of the proposed system up even further due to unforeseen and unpredictable events during and after the installation of the facilities?

We can't foresee every possibility .most projects of this kind and scale have things happen which can't be planned. The numbers used so far are estimates. The real cost won't be known until tender bids are submitted.

- 3.4 What financial contingency plan is in place to address these events should they occur?

There is a 15 percent contingency fund included in the estimates we were provided and the village will be in a better position to evaluate the costs once tender are received.

Location of Lagoon

- 3.5 Meets environmental guidelines: Between February 2009 - when Roy Consultants made their Sanitary Sewer Servicing Options presentation to Council, and April 24, 2009 - when the new map (Option 9) was added to the package of information provided to Council by Roy Consultants at the time of the aforementioned presentation, when where the environmental guidelines reassessed thus leading Council to choose a new location for the lagoon?

This question should be directed to the DOE.

- 3.6 What new information was available to Council when they reassessed the site for the lagoon?

That less materials, less digging, less labour would obviously mean less cost.

- 3.7 Re: Closer to pumping station and outfall discharge, therefore reducing cost of project and user rates: How could Roy Consultants and Council arrive at this conclusion given that no cost estimate was provided with this new (Option 9) added to the package of information on April 24, 2009?

See previous answer and estimates were provided and included more streets than the original estimates.

- 3.8 Do the members of Council really have the best interests of the taxpaying citizens of Belledune at heart when they promote this project or are they protecting personal and individual interests?

Council is doing what they feel is best for the entire community.

- 3.9 Is cheap and cheerful really the best way to go with this project?

No comment.

- 3.10 Will ultraviolet disinfection eliminate phosphates, nitrates and ammonia from the effluent prior to its discharge into the Bay of Chaleur?

No

- 3.11 If "the water is clear enough to drink as soon as it comes out of the outfall pipe" as stated by Mayor Duivenvoorden, why is it necessary to "permanently close shell fishing within 300 m radius of the end of pipe"?

The 300m radius closure of shell fishing is a federal procedure and it is applied to all sanitary sewage discharge in Canada, it is not something specific for the Village of Belledune.

Justification of the System

- 3.12 What effect will the "clear enough to drink" effluent have on the shellfish located within 300 m of the outfall pipe?

Effects will be minimal since site is considered of limited suitability for lobster (see SEnPAq Report).

- 3.13 Will a sanitary sewer system remediate and/or eliminate the existing problems of chemical and salt-water intrusion from the wells?

If household chemicals are being discharged in septic tanks and we confirmed that some systems are discharging into the storm sewer and/or in the ground, the system will reduce this input into the groundwater. The system will not reduce salt water intrusion.

- 3.14 Why does the proposed sanitary sewer system project exclude approximately 1/3 of the Armstrong Brook Subarea including Veteran Street – where nonviable residential lots are located (Page B5, Appendix B – Subarea Maps Belledune Wastewater Management Study, Engineering Technologies Canada Ltd., February 2007), Culligan Sub-area and Belledune River Subarea?

Veteran Street is included. Any other streets were excluded only due to cost (i.e.: we only have so much funding this time around). No doubt other homes can be added in future years if funding becomes available

2006 Village of Belledune Wastewater Management Study

- 3.15 Why were the residents of the Belledune Town site, who are already receiving free water and sewer services from Xstrata, included in this survey?

We were not aware that they were. We will need some background to answer this question.

- 3.16 Referring to question 8 of the 2006 Village of Belledune Waste Management Study: "What type of sewage disposal system do you have"? In all fairness to the respondents to this survey, why didn't the answer options allow for the distinction between and on site individual septic system and a sewerage system like the one available to the residents of the Belledune Townsite (i.e. the 30 properties on Chaleur Drive)?

Not clear why the above comment is made, studies recommend a central system for the serviced area.

- 3.17 Given the past and recent incidents of vandalism and mischief in West Belledune, what security measures will be in place to protect the lagoon site and installations, including the outfall location?

A fence will be installed at the perimeter of the treatment facility. The outfall diffuser structure will not be accessible to the general public. It will be located lower than low tide. It will therefore be accessible by diving only. Also other facilities are planning to have video surveillance cameras and lighting .It is possible to add this site once finished.

Decommissioning of Obsolete, On-Site Septic Systems

- 3.18 Who will be responsible for this, how will council ensure that it is properly decommissioned, and who will bear the cost? Will these costs be in addition to the cost associated with hooking-up to the system and subsequent user fees?

Please see response to question 2 in the letter dated October 29, 2009 addressed to Shawn Hamilton (NBENV).

- 3.19 What are the real reasons the project was abandoned and defeated in the past? What is the difference this time around?

This council certainly can't speak for previous councils decisions

Groundwater Contaminated

- 3.20 Will wells located near the lagoon site be tested prior to starting construction and operations at the lagoon? What type of groundwater monitoring program will be implemented in order to assess future potential contamination to the groundwater feeding my and my neighbors' wells? What compensation and remediable measures are proposed if and when seepage from the lagoon site or from a broken pipe anywhere in the system or acts of vandalism at the lagoon site or at the outfall site contaminates the aquifer and/or adjacent wells?

Groundwater monitoring will be conducted periodically, the specific frequency has not been determined. Five (5) monitoring wells will be drilled. A percentage of the wells near the proposed system will be tested to produce baseline data.

- 3.21 Question about passing a by-laws to force residents to have their septic tank pumped whenever the Village feels like it and charge the residents dumping fees for doing it.

Private Septic Systems will fall under the Provincial Dept. of Health not municipal by-laws per se .

- 3.22 Will the facility be designed to allow it to receive hauled septage from licensed septic services companies or other industrial facilities in the future?

The facility will not be designed to receive hauled septage nor will it be equipped with a septage receiving station.

- 3.23 If this idiotic and unwanted project comes to fruition, will the 1 acre size of a building lot, now required by the Belledune Planning Commission, be allowed a reduction in size? If yes, what is the guarantee that access to potable water in sufficient quantities will remain available to everyone drawing from a common source on these smaller building lots?

*The New Brunswick Regulation 82-159 from the Community Planning Act states:
6 (3) Where a proposed subdivision is to be serviced by a sewer system for public use but not by a water system for public use, every lot or other parcel of land therein shall have and contain:*

*a width of at least twenty-three metres,
a depth of at least thirty metres, and
an area of at least six hundred and ninety square metres*

Anything further details to the above would be best left to the planning commission to answer

3.24 What will happen to property value assessments both within and outside the service area?

As stated previously it is not anticipated that property values will increase due to a sewer system.

3.25 Will this new 150 m guideline be respected in this case?

Yes, the water surface of the proposed lagoon will be located 150m from the nearest house

3.26 What is the difference in noise levels produced by aerators versus blowers with an air moving capacity of 300 cubic feet per minute (CFM)? Will these blowers be submersible or located above ground? Is there a possibility for constant noise to be produced – low hum, constant drone, etc.? If yes, how will this continuous noise affect the sanity, the tranquility, the concentration and the hearing of the people living within the 100 m to 150 m – whichever distance will apply in this case – to the lagoon?

See answer to Question 4.14 of this letter.

3.27 Will there be a foul odor emanating from this lagoon and windblown to my property which is located on east side of this lagoon?

Refer to Question 4 in the open house handout package.

3.28 Will an odor impact analysis be done prior to the startup of the unwanted facility given that my home is located approximately 100 m from the proposed lagoon site?

No odor impact analysis is planned prior to operation of the proposed wastewater management system.

3.29 Please explain why the taxpaying citizen of Belledune were not told about the project, were not asked if they supported the project and were not informed of Council's intent for forge ahead regardless of their wishes and views on the topics? Is there an ulterior motive spurring Mayor and Council to relentlessly defend and forge ahead with this unwanted project?

The project was discussed in public meetings and written about. It is hard to imagine how anyone could not have known about it. A survey was done and people were asked. There are no ulterior motives

3.30 Will Mayor and Council live up to the Core Operating Values mentioned in the 2009 Strategic Plan and provide answers to all of my questions prior to start of construction?

All reasonable questions will be attempted to be answered.

4.0 Document received on June 22, 2009

- 4.1 How can mayor and Council justify spreading false information and fear throughout the Village that a great number of wells are contaminated with sewage when they have no data to support this claim?

These concerns are based on anecdotal comments from residents. Baseline well water testing would be one way to confirm these comments from citizens, some of whom have had their own water tested and confirmed E. coli in the water.

- 4.2 What evidence can Mayor and Council put forth to validate their claims that “it is only a matter of time” before the groundwater is compromise due to failing septic system?

We know that there is E. coli in the storm sewer. We know that some residents have confirmed E. coli in their drinking water. In certain areas the ground water may already be compromised. Baseline well water testing would confirm this suspicion. This of course, would require the consent of property owners.

- 4.3 What efforts have Mayor and Council made to prosecute illegal connections to storm drains along Main Street?

Testing for E. coli in manholes has been completed. Videotaping in the storm sewer has confirmed the existence of both septic overflow connections and water overflow foundation drainage connections. A final course of action on what should be done has not been decided yet.

- 4.4 (Several questions regarding NB Department of Health’s sampling results-send to health??)

These questions should be addressed to NB Department of Health.

- 4.5 Have there been any cases within the Village of Belledune where health problems can be attributed to microbiological contamination of drinking water?

We assume there have been but of course this is usually a matter of personal health records which are confidential.

- 4.6 What basis do Mayor and Council have for believing that they would buck local, regional and provincial trends of out-migration?

This is simply an assumption looking at where the housing development has happened in the region and where such municipal services exist allowing for smaller building lots.

- 4.7 What consideration has Mayor and Council given to the potential impacts the proposed project will have on vulnerable segments of the population including low-income families, seniors and those on fixed-incomes?

The village at this point is attempting to obtain confirmation that welfare recipients would get an increase in their cheques to cover the cost. Aside from this loans will be made available for connection fees and no frontage charges will be made. We are actively reviewing other measures that might assist.

- 4.8 Five questions regarding the refusal of payment of user fees and what actions will be taken?

This will be addressed within the content of a municipal by-law

- 4.9 What will be the average increase in property assessment within the Village of Belledune should a public wastewater management system be imposed on residents?

We have discussed with other communities and expect no such increases from this project because these are primarily market driven

- 4.10 When did the Village of Belledune become a dictatorship? Are Mayor and ...

This question is filled with bias and sarcasm and will not be answered.

- 4.11 How do Mayor and Council propose to mitigate damages or compensate residents should there be a change in groundwater quantity or groundwater quality directly related to the proposed to the proposed public wastewater management system?

The village would be responsible should there be a change in groundwater quantity or quality directly related to the proposed public wastewater system. A baseline water quality sampling will be conducted on water wells near the proposed project. The NB Department of Environment indicated that if the village intends on completing a base-line sampling, approx. 10% of the wells near the main sewer line and the lagoon in strategic locations could be sampled.

- 4.12 What types of groundwater monitoring will be conducted during operation of the proposed sewage lagoon? How many test wells will be drilled and at what intervals around the buffer zone? Will the village of Belledune pay to test private wells in the vicinity of the proposed lagoon? Is so, how many well will be tested and at what radius from the sewage lagoon?

Groundwater monitoring will be conducted periodically; the specific frequency has not been determined. Five (5) test wells will be drilled. All residents within 500 m radius of the proposed lagoon will have the opportunity to have their potable well tested if they want to.

- 4.13 Are there other communities within NB that have no public source of drinking water but have established a public wastewater management system similar to the proposed for the Village of Belledune? What is the distance between the nearest residents and the sewage lagoon? If there is no impact on residents living close to the sewage lagoon why have the distance guidelines changed from 100 m to 150 m?

The closest examples in this case would be the Village of Pointe-Verte where the aerated lagoon sits approximately 133m from the closest house and approximately 90m from a cottage. The LSD of Allardville also has a sanitary sewer system but the lagoon is a stabilization lagoon without any aeration. The nearest house in this case is approximately 233m.

The question regarding the change in guideline should be answered by the NB Department of Environment.

- 4.14 Will the noise levels from the lagoon exceed the acceptable threshold of 80 dBA for an 8 hour period? Will the Village of Belledune record ambient noise levels around the proposed lagoon and as far as 500 m radius around the lagoon?

Mitigation measures were proposed in the EIA Registration documentation regarding noise produced by the blowers.

The proposed blowers and inlet will have acoustic enclosures to reduce noise level.

The Village of Petit-Rocher aerated lagoon has similar types of blowers (but with more horse power) as the one proposed for Belledune. The manufacturers of the acoustic enclosures have satisfactory data on the units but in order to confirm this information for potential noise levels, readings were measured at the Petit-Rocher blower buildings and gave the following results:

*3m front intake: 48 dBA
10m front intake: 41 dBA
20m front intake: 38 dBA
40m front intake: 28 dBA
60m front intake: 20 dBA
80m front intake: 10 dBA*

Based on above readings, the noise level should not be a concern.

- 4.15 Will the Village of Belledune conduct an odor impact analysis prior to operation of the proposed wastewater management system?

No odor impact analysis is planned prior to operation of the proposed wastewater management system.

- 4.16 Will the Village of Belledune conduct tests to determine what the mosquito population is prior to the operation of the proposed sewage lagoon? If not, how will the Village of Belledune demonstrate that mosquito populations have not increased due to the presence of a sewage lagoon – should complaints arise?

As explained in the EIA registration documentation, section 4.2, the HDPE liner combined with the turbulence created by the aerators does not provide a suitable environment for mosquitoes. No mosquito population survey will be carried out prior to operation of the proposed sewage lagoon.

- 4.17 What impact will installation of the sewer pipes have on these sensitive and important coastal habitats (Jacquet River estuary)? What precautions will be taken to ensure minimal disruption to wildlife? If the sewer pipe cannot be attached to the bridge over the Jacquet River what impact will there be to Atlantic Salmon and the conservation efforts to restore this species in the Jacquet River if the pipes have to go below the river? What is the potential risk to wildlife and wildlife habitat should there be a break in the sewer line?

See answer to question # 40 in the letter to TRC dated December 11, 2009. In both options, coastal habitats and wildlife will be protected.

Because of the directional drilling option was chosen, 100% of the piping will be buried.

- 4.18 How will the effluent be treated? Will it be sampled before it is discharged? Will the tests include phosphates, nitrates and ammonia? What is the protocol if the scheduled discharge has elevated levels of any one of these chemicals? If the outfalls is "drinkable water", why is there a 300 m radius closure of shell fishing? Will the effluent meet national health guidelines for recreational water (that is, will it be clean enough to swim in, before it enters the ocean)?

Treatment: Refer to answers to questions # 3, 6, 19 and 21 in the first response letter.

Sampling protocol and parameters will follow the Certificate to Construct issued by the Department of Environment

An aerated lagoon treats the wastewater by settling solids and by a natural bacteriological process and is improved by injected oxygen. After the lagoon, UV light is used to reduce the E. coli count under 200 E. coli per 100 mL. The effluent will meet the national guidelines for recreational water quality.

Sampling will be performed in accordance to the requirements of the Certificate of Operation emitted by the NB Department of Environment. As mentioned in the EIA Registration Documentation, discharge will be done on a continuous basis. In the event that the effluent does not meet the applicable guidelines, correctives measures would be

added to the existing treatment. However, it should be noted that a safety factor has been added to the design criteria, which minimize the risk of having a non-conform effluent. The 300m radius closure of shell fishing is a federal procedure and it is applied to all sanitary sewage discharge in Canada, it is not something specific for the Village of Belledune.

- 4.19 How can Mayor and Council justify the potential risk to this tourism asset – especially since they have hired Glenn Group (at a cost of over \$21,000) to develop a sustainable tourism plan featuring the Jacquet River Campground as a point of entry to the Village?

Given the already mentioned safety designs and protocols we do not see a risk to the asset

5.0 Email received on July 16, 2009

- 5.1. If the system fails where does the raw sewage go? Into the bay?

Refer to answer to question # 3 in first response letter to TRC dated October 29, 2009.

- 5.2. How many septic systems are currently malfunctioning? (I suspect we do not know this)

The Health department does not give this information but based on results of sampling in the existing storm sewer, it is obvious that there is a problem.

- 5.3. Of the malfunctioning systems how many of them could be repaired thereby minimizing the need for a sewer system?

We do not have sufficient data to be able to answer that question nor is it available.

6.0 Document received on July 24, 2009

Project Overview

- 6.1 Why the discrepancies between these numbers? Please explain.

The units count is not equal to the building count.

- 6.2 What is the actual number of units which will be connected to the system?

See table attached with October 29, 2009 letter to Technical Review Committee.

Purpose/Rationale/Need for the Undertaking

- 6.3 Given the above information, what is the supporting evidence for the assumption that "the lack of a sanitary sewer collection and treatment system discourages new residential and commercial constructions as well as the economical growth of the proposed serviced area?"

Any community that has grown in the past decades had the basic service of sanitary sewer.

- 6.4 Is it possible that the lack of a public water source or watershed may also be a contributing factor which "discourages new residential and commercial constructions as well as the economical growth of the proposed service area?"

We agree and this is why it was looked at and as stated in the open house documents, is not available at this time.

- 6.5 Is it possible that the decline in population, a rapidly aging population and the lack of educational and employment opportunities may also be a contributing factor which "discourages new residential and commercial constructions as well as the economical growth of the proposed service area?"

Possibly, but we are hopeful that with basic infrastructure, new residential and commercial construction can stimulate growth and change this situation.

- 6.6 *This project contributes to a sustainable environment by assuring proper wastewater treatment, therefore minimizing the amount of **solids** (emphasis mine) polluting the receiving waters.* (Environmental Registration, Page 2).

What facts, evidence, studies or data support this statement?

This system will operate under a controlled environment and flow and effluent data will be collected and recorded and modifications can be done, if required. The effluent will meet environmental guidelines. The sample results taken in the storm sewer, which discharge on the beach, were far from meeting the guidelines.

- 6.7 Why is it that other delinquent septic systems are not dealt with in this manner thus eliminating the need for a 7.1 million dollar unwanted wastewater management system?

Most of the existing systems are on lots that are too small to properly operate. Further questions should be directed to the Department of Health who regulates these systems.

- 6.8 Where is the evidence supporting the following statement "This option gave the lowest annual unit cost of all the options evaluated"? Please explain how a +/- \$7,098,000 project with a projected annual user rate of +/- \$600/unit *1 is less expensive than a +/- \$6,935,000 project with a projected annual user rate of +/- \$552.39/unit *2? (*1 Welcome

to the Open House for the Village of Belledune West Sanitary Sewer System, Village of Belledune and Roy Consultants, June 2, 2009; *2 Village of Belledune Sanitary Sewer Servicing Options, February 2009).

It is important to clearly understand that the user rates presented by any engineering firm to their clients is an opinion of the costs without having "any" detailed design done. Many factors can affect the rates (i.e.: final construction costs, available funding, interest rates and amortization period, etc.). The rate presented in the open house was set at \$600/year as a contingency to the above variables.

- 6.9 Could high cost estimates, which would mean financial hardship for the citizens of Belledune West, be behind the true reasons this project was rejected 4 times in the past?

Any answer here would be conjecture.

- 6.10 Given that the population decline in Belledune was 19% over a period of 3 censuses (Statistics Canada 1996, 2001 and 2006 – Community Profile), that the “*The population continues to diminish and to grow old rapidly...*”, (March 2008 Rural Plan of the Village of Belledune, Page 5) and that the number of private dwellings diminished by 46 between 2001 and 2006, (Statistics Canada 2001 and 2006 – Community Profile) why the urgency in establishing a sanitary sewer system in West Belledune at this particular time?

Whether the population grows or shrinks effluent flowing into the Bay is not acceptable.

- 6.11 Regarding the February 7, 2005 Village of Belledune monthly meeting, why is there no follow up of the option discussed at other council meetings or mention of this option anywhere in the Environmental Registration for this project?

The cluster systems were evaluated in the Engineering Technologies Canada Report and the Central System was recommended.

- 6.12 Why didn't the municipality work with the Department of Health representatives towards a solution to the problems of delinquent individual septic systems they so readily profess to have identified?

Septic tank management was evaluated in the Engineering Technologies Canada Report and the Central System was recommended.

Project Location

- 6.13 What existing problems are the authors of the Environmental Registration referring to?

Samples taken clearly indicates that there are existing problems. Further questions should be answered by the DOE.

6.14 Where is the data to substantiate this statement?

Again, sample results in storm sewers have proven that there is a problem.

6.15 What studies and/or documentation support this assumption?

Again, sample results in storm sewers have proven that there is a problem.

Siting Consideration

6.16 Will the Project Manager from the Department of Environment do a visual site inspection prior to approving this project?

To be answered by DOE.

6.17 What remedial measures are proposed by the proponents of this project when this site collapses due to aggregate degradation?

Pipe installation will not disturb the slope to the beach at the end of Brideau Lane due to the construction method.

6.18 Why was "*meets environmental guidelines*" dropped from the list of reasons supporting the choice of site for the lagoon?

It was not dropped on purpose, it still meets guidelines.

Physical Components and Dimensions of the Project

6.19 Since I am not aware of anyone in Belledune who has the expertise, is qualified or has the equipment to do testing on wastewater, who will evaluate the wastewater of any potential special industry before it is directly discharged into the new system?

The system will be designed to handle existing BOD loadings. If a new industry sets up with the potential of higher concentrations, it will be verified.

6.20 What guidelines for wastewater management would apply in this case?

Atlantic Canada Wastewater Guidelines Manual for collection, treatment and disposal 2006.

6.21 What test results and documentation support the statement that the site "*has good drainage capacity*?"

The existing ground slope where the lagoon will be located has a slope of over 3.5%. It has excellent drainage capacity.

Operation and Maintenance Details

- 6.22 Will the Village of Belledune hire specially trained personnel to do this job or will they train existing municipal workers?

At this point it appears that outside expertise will be used.

- 6.23 This extract is in direct contradiction with a statement made in section 2.6 – Physical Components and Dimensions of the Project found on page 4 of the Environmental Registration document which follows.

Extract: *“There are no known potential industries or significant users in the proposed serviced area. However, the wastewater of any potential special industry would be evaluated before permitting direct discharge into the new system.”*(Emphasis mine)

Will the facility be designed to accept wastewater from industrial facilities or will it not be designed to accept wastewater from industrial facilities? Please clarify and explain the contradiction between these two extracts.

The statements are clear, it will not be designed to receive hauled septage. If it is ever requested, it will be evaluated. If the system cannot take the proposed load, it will not be allowed to use the facility

- 6.24 Will the proposed ultraviolet disinfection eliminate phosphates, nitrates and ammonia from the effluent prior to its discharge into the Bay of Chaleurs?

No

- 6.25 What will be the impact and ramifications of phosphates, nitrates and ammonia on the waters of the Bay of Chaleurs?

The diffuser location is based on proper mixing to minimize the impact on the receiving waters and no significant impact is expected

Future Modifications, Extensions or Abandonment

- 6.26 What types of modifications could be considered in the future besides expansion?

Adding aeration or adding a cell could be considered but as stated the facility should satisfy the future growth.

- 6.27 Given the contradiction in the extracts presented in section 2.8 of my comments, could one of the modifications be "*to allow receiving of hauled septage from septic service companies or other industrial facilities*"?

This was already clarified.

Watercourses, Rivers, Streams, Drainage Ditches, and Wetlands

- 6.28 Prior to the completion of the EIA, will the department of Health representatives sample the waters of Armstrong Brook and the tributary to Armstrong Brook for the presence of E. coli 0157:H7 which, according to the New Brunswick Department of Health's own Public Information Fact Sheet dated September 2003 **is a bacteria that lives only in cattle** (Emphasis mine)?

To be answered by the Department of Health.

- 6.29 Is it possible that the Jacquet River Campground beach was closed due to the presence of the strain of E. coli known as 0157:H7 and not human wastewater?

To be answered by the department having authority.

Private or Municipal Wells

- 6.30 If this unwanted project comes to fruition, will the 1 acre size of a building lot, now required by the Belledune Planning Commission, be allowed a reduction in size? If yes, what is the guarantee that access to potable water in sufficient quantities will remain available to everyone drawing from a common source on these smaller building lots?

Well counts are identified in letter to Technical Review Committee. Planning Commission guidelines are stated in previous question.

Air Quality and Noise and Climate and Air Quality /Noise

- 6.31 What is the present and actual noise level in decibels at the studied site?

Wooded areas should be around 10 to 20 dBa on an extremely calm day but was not measured.

- 6.32 What is the projected noise level in decibels at the studied site during construction and operation of this system?

Construction will be typical to any construction sites and operation noise levels where previously answered in question 4.14.

- 6.33 Is there a potential for vibrations from working aerators to be transmitted to adjacent properties who are sitting on top of bedrock?

No.

Odors

- 6.34 What guidelines or standards pertaining to odor will apply at the Belledune West Sanitary Sewer System?

Atlantic Canada Wastewater Guidelines Manual for Collection, Treatment and Disposal, 2006

Potential Effect 1: Emissions generated from equipment and vehicles as well dust will be released into the air.

- 6.35 Who will supervise the site to ensure that all the mitigation measures proposed in this segment are respected as described in the Environmental Registration?

The Contractor will have a contractual obligation to follow the mitigation measures and the Consultant will have inspectors on site and if problems are noticed directives will be given to the Contractor.

Potential Effect 2: Noise will increase during construction activities.

- 6.36 Who will supervise the site to ensure that all the mitigation measures proposed in this segment are respected as described in the Environmental Registration?

Answered above.

Potential Effect 3: The blowers have the potential to produce noise during the operation.

- 6.37 Who will supervise the operation to ensure that all the mitigation measures proposed in this segment are respected as described in the Environmental Registration?

The noise level question has already been answered.

- 6.38 What guidelines or by-laws presently addresses noise levels in the Village of Belledune?

By Law 1995-12

- 6.39 What guidelines or standards pertaining to noise will apply at the Belledune West Sanitary Sewer System?

The current by-law has no specific inclusion for this but we do not feel that noise will be a significant issue. Please note that above dBA levels for HRM (Halifax Regional Municipality) are for mechanical plants.

- 6.40 Who will monitor the Belledune West Sanitary Sewer System for these very same problems as the Dartmouth Plant?

The HRM Dartmouth Sewage Plant is a 3 stage mechanical plant. These plants are very high in maintenance and does not offer the flexibility to adapt to changes in flows like an aerated lagoon, therefore, cannot be compared to the proposed Belledune treatment facility.

- 6.41 What mitigation is recommended in the eventuality that the same problems are encountered here? (Hopefully, duct tape, a garden hose and a plastic bucket are not part of the recommended mitigation?)

See letters to Technical Review Committee for mitigation measures.

Existing Wildlife and Vegetation

- 6.42 What are the mitigation measures referred to in the above extract?

Clearing of the site will be done within the windows allowed by the guidelines or an inspection will be done to confirm the presence of bird nests.

Exploitation and Maintenance

- 6.43 **Extract:** *"There is also a small potential for odours and mosquitoes...However, some noticeable odours and mosquitoes can be present at these types of facilities..."*

Will this potential for mosquitoes increase the potential of exposure to West Nile Virus?

Comment on odors and mosquitoes have been addressed in the open house and the facility will meet environmental guidelines.

Accidents and Malfunctions

- 6.44 What recourse will individuals, who didn't want the system in the first place have when, God forbid, something goes wrong with the system or when they suffer nuisance from the operation of the system?

Question is too general and cannot be answered clearly, however, this will be constructed and operated to the new guidelines so it will be better than many other systems in the province of New Brunswick which have proven to be acceptable systems.

Fishing

- 6.45 How will this affect the Community Overview featured on the Village of Belledune website and the tourism industry?

The restricted zone will be 300 m from the outfall as previously indicated.

7.0 Documentation Received on July 24, 2009

Number of connections within service area

- 7.1 Why the discrepancy in numbers presented during the Public Open House and the EIA Registration document and the number of units identified by the Village of Belledune and myself?

The initial count was based on a preliminary review, which is the normal process. The detailed unit count done by the Village of Belledune will be used when working the final numbers. As previously indicated, please note that a unit is not always equal to a dwelling.

- 7.2 Please provide some clarification on user fees for the following:

Developed residential lot

Developed commercial lot

Developed lot with dwelling set back greater than 50m

Developed residential lot with vacant dwelling

Vacant lot

Rental units in multi-dwelling building

User fees for people who choose not to hook into the public system – regardless of set back distance of their home.

These are policy decisions that will be decided in due course but have not been decided yet. These matters will be spelled out in a municipal by-law .

Cost of connection

- 7.3 What is the adjusted cost to install services to individual home/business owners in proposed service area?

This question was answered during the open house. The following is the information that was provided in the handout packages as follows:

This depends on the length, but in 2008, the cost to install services to a house in Bathurst was between \$70 and \$100/m (\$21 and \$31/ft). This does not include rock excavation, topsoil or hydroseeding.

Purpose/Rationale/Need for the Undertaking

- 7.4 Has the justification for a sanitary sewer system within the Village of Belledune been reduced to a supposition that not having one “discourage growth within the proposed service area”?

No.

- 7.5 What is the advantage to the environment of having the effluent of approximately 300-370 residential/commercial properties entering the Bay Chaleur?

The effluent of the proposed system will be monitored to ensure that proper treatment is achieved as per applicable environmental guidelines. The Bay Chaleur being the largest water body near Belledune minimized potential environmental effect.

- 7.6 Ultraviolet disinfection is the only treatment plan for effluent going to Bay Chaleur. What is the advantage of proposed system versus current private systems already in place?

It is very important to note that ultraviolet disinfection is not the only treatment of the proposed sanitary sewer system. A major part of the treatment is performed within the lagoon. Refer to previous answers regarding treatment.

- 7.7 Overflow pipe will discharge raw sewage directly into the Bay Chaleur. How will this system "minimize" the amount of solids polluting the receiving waters?

(Refer to answer to question 4 in letter to Technical Review Committee October 29, 2009). In addition, the emergency overflow will be equipped with a baffle or screen which will control the solids during an overflow event, should this happen.

- 7.8 What amount of solids is polluting the receiving waters currently? What is the source of these solids where currently polluting the receiving waters?

The only information we have is that all 8 manholes were tested for ecoli and 100 percent were above acceptable levels. In addition a robot with video cameras has confirmed the existence of dozens of septic overflow pipes connected to the storm sewer ultimately sending effluent into the Bay during heavy rain or when septic tanks are overfull .

Project Location

- 7.9 What is the rationale for locating the lagoon so close to residential properties?

Site Consideration was discussed in section 2.5 of the EIA Registration Documentation.

- 7.10 What consideration did the village give to future development in their choice in locating the lagoon off Jacquet River Drive?

The main reason for this system is to clean up the environment but another is to encourage economic growth which is difficult without the basic infrastructure. The lagoon location would be ideal to reduce the cost of developing residential subdivisions on the properties south of the lagoon site.

- 7.11 Why is Roy Consultants proposing the use of blowers instead of submerged agitators, which generate less noise?

The proposed system will have submerged aeration pipes and diffusers and the blowers will be inside a building, which will be equipped with acoustic enclosures. This system is also more efficient than the above system. The mechanical equipment being inside a building is easier to monitor and maintain, especially during winter conditions. If submerged agitators were to fail during winter, it would not be practical to install new equipment in ice conditions. Treatment would be affected by any equipment not maintained or replaced when needed.

Impact of proposed outfall location on public enjoyment and tourism potential for Jacquet River Campground.

- 7.12 Why was the outfall pipe moved to its current proposed location at Brideau Lane from the original proposal at Legacy Road given the potential risk to the beach – especially since the Village of Belledune hired Glenn Group (at a cost of over \$21,000) to develop a sustainable tourism plan featuring the Jacquet River Campground as a point of entry to the Village?

This site was chosen to reduce costs associated with the distance from the outflow pipe and the main system.

Alternatives to the proposed project

- 7.13 How much effort has the Village of Belledune/Department of Health made to prosecute illegal connections to the storm sewer? Can the Department of Health and the Village of Belledune work together to determine the extent of the problem and work directly with property owners to remedy the situation? This may be a more cost effective solution than the \$7+ Million alternative currently proposed by the Village of Belledune.

Samples were taken in the storm sewers and the levels detected clearly indicates the presence of substances other than storm sewer. Video inspection was done on portions of the system (some were not accessible due to materials in the pipe, even after power flushing) and service pipes were found.

- 7.14 Why did the Village of Belledune decide not to pursue this type of program given the cost is more affordable and the willingness of area residents to participate? (Adoption of enhancement)

The majority of the lots in the proposed serviced area are too small to install a proper seepage tank and drainage field system.

Socio-Economic Conditions

- 7.15 How does the Village of Belledune propose to recoup loss through defaults on loans for installation fees?

A lien on the property is the likely outcome.

- 7.16 Why should people be forced into debt for a system they do not need, do not want, and most importantly, can not afford?

This question is laden with bias and can not be answered.

- 7.17 No bank would provide these loans because of an inability to repay. Why should the Village of Belledune be able to take the financial risk – which will undoubtedly be passed on to the taxpayers?

The village is considering this because we have been asked to help those who are less fortunate to be able to connect to the system. Any Solution will comply with Provincial Regulations.

- 7.18 A cost-effectiveness analysis must be performed to ensure that the construction and the operation and maintenance are reasonable and appropriate given the financial constraints of the residents.
(4 questions)

This is not a question it is a statement. However if it was a question, the answer is; We believe that the most cost effective model was chosen which would deal with both the short term and long term issues by connecting as many homes as possible and lowering the unit cost.

8.0 Letter received on July 27, 2009

- 8.1 We discovered at the open house that the pumping station was on our property and were never approached for this and we do not consent to this.

The pumping station will not be located on the Russell property.

9.0 Document on first letter to TRC received on October 29, 2009

- 9.1 Is it possible for the proposed sewer system to contaminate adjacent potable water wells? If yes, how will residential homeowners be protected if contamination occurs?

The entire system will be tested to meet the environmental guidelines. Any post construction and operational questions will be addressed in the Certificate to Operate issued by the Department of Environment.

- 9.2 Will there be safety measures in place in case of failure of the sewer system and where will untreated effluents or other contaminants be discharged?

The “worst-case scenario” presented by Roy Consultants is misleading and actually minimizes the potential threat by choosing a scenario that shuts down the entire system. It assumes that power failures will always occur throughout the entire service area. The real threat for contamination occurs during a partial power failure which would include the pump station but not the entire service area in which case there would still be sewage entering the system which could not be pumped to the lagoon.

Roy Consultants does not include the sewer pipes as part of the sewer system. What safety measures are in place if there is a problem within the piping system?

How far from the pumping station will the power generator be stored? What is the retention time within the system to hold back raw sewage before it is dumped in the nearest “watercourse”?

If a pumping station is to be located on the Jacquet River (as indicated in Roy Consultants’ response to Q23) will raw sewage be discharged directly into the Jacquet River? What consideration has been made for the conservation of salmon and birds in this area?

Any partial power failure will reduce flows to the pumping stations and give more reaction time to the operator. Again, details for operation will be addressed in the Certificate to Operate issued by the Department of Environment.

- 9.3 After treatment, will effluent from the lagoon be monitored on a regular basis before entering the Bay of Chaleur? Will the effluent meet the standards for secure bathing?

How is the effluent monitored/tested? What protocol/procedures are in place if the effluent does not meet standards? Will it be released anyway or will it be retained in the lagoon?

Same as above regarding Certificate to Operate.

- 9.4 Will monitoring wells be installed between the proposed lagoon and surrounding private wells?

How many monitoring wells will be installed? At what intervals around the lagoon will the wells be drilled?

Already answered in second letter to Technical Review Committee

- 9.5 Will baseline water quality sampling be conducted on water wells located near the proposed project?

What criteria will determine the “strategic” nature of the wells chosen to be tested for the baseline water quality?

Already answered in second letter to Technical Review Committee.

- 9.6 Will any blasting be required for any aspect of the project (lagoons, outfall pipe, sewer lines, etc.)?

How will homeowners be protected from/compensated for any/all damage caused by blasting? Will the Village of Belledune be responsible for damages or will homeowners have to rely on home insurance policies? Please note that homeowners are being dropped by insurance companies because Belledune is now considered a “high risk” area.

After a review of the geotechnical investigation, blasting is not scheduled to be used for this project.

- 9.7 Section 2.6 entitled Physical Components and Dimensions of the Project lists buildings to be included as part of the project. Will an equipped laboratory be included as part of the overall project?

How is water sampled? What do the tests entail? What contaminants are monitored? What specialized equipment is required? What specialized training is required? Who can perform this task – a certified technician or general maintenance staff?

If water samples must be sent off to a testing laboratory, where are they sent and what is the turn around time for test results?

All the above is regulated by the province and will be specified in the Certificate to Operate. Typically oxygen levels are monitored on site and all other samples are sent to an approved laboratory for testing.

- 9.8 The target for effluent water quality for BOD is 15mg/L and a TSS of 20mg/L. What guideline or authority makes this project meet such a strict effluent quality?

How is such a target achieved? What is the protocol/procedure if effluent does not meet such "strict" effluent quality?

Lagoon will be designed to achieve the targets. Elaborating on the design here would simply not be practical. Protocols will be indicated in Certificate to Operate.

- 9.9 The original wording in the Technical Review read as follows: "The proponent is, or has the consent of, the adjacent upland owner(s)"

The document submitted by Roy Consultants has the wording changed to "*The proponent has to notify the adjacent upland owner(s)*". The document goes on to state "*all work will be done on Village owned property. A formal notification will be sent to upland owners*".

The outfall pipe goes to the end of Brideau Lane and through *private* property belonging to Evlynn Loubert (PID 50074806). Ms. Loubert has clearly indicated that she will not consent to having the outfall pipe located on her property.

The assertion by Roy Consultants that "*all work will be done on Village owned property*" is incorrect and omits the intention to begin expropriation proceedings against Ms. Loubert to obtain this property.

Negotiations with this land owner were going well but have failed after being contacted by some residents of Belledune. We are proceeding with expropriation.

- 9.10. Will the amount and quality of the effluent have any effects on the fisheries in the vicinity of the proposed outfall?

This question has not been answered. No reference is made in the response to the impact to local fishermen where the outfall pipe dissects their fishing grounds. The increased length of the outfall pipe has a greater impact because the distance from shore is now in the peak lobster fishing area (personal communication with local fisherman, Chester LaPointe).

The outfall location is based on proper design of the receiving waters and plume mixing analysis. No fishing will be allowed within 300 m of the outfall as mentioned before, this is a guideline.

- 9.11 An explosive management plan should follow the Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters.

The use of explosives may require an authorization under Section 32 of the *Fisheries Act*.

Once again there is no reference to activities near the Jacquet River.

Will *any* part of this project require blasting (laying sewer pipes, pumping station, etc.) near the river?

No blasting is expected.

- 9.12 The proponent must ensure that prior to any blasting activities required as a result of this project, a well construction survey shall be completed and submitted for review.

Will residents of Jacquet River Drive be included in this survey? Although not on the service line, these residents are likely to be negatively impacted by blasting activities at the lagoon site.

No blasting is expected.

- 9.13 Describe how the environment will be protected during the installation/construction process...includes the protection of watercourses and ESA 056 Jacquet River Estuary. Please note that the Jacquet River Estuary has important habitat for bird and fish species.

Will the pumping station at the Jacquet River be equipped with an emergency overflow pipe? And will this overflow pipe discharge to the Jacquet River?

I am also curious to know how it was determined that only a small percentage of the residents in the service area have a back-up generator for their homes. Using this as a basis for determining that there will be no discharge into the system needs clarification.

Will the Village of Belledune have power generators for both pumping stations? What is the proposed protocol when SCADA alerts a failure at the lagoon or pumping station outside of normal working hours? What is an acceptable response time for having this equipment in working order?

During the option review. DOT were consulted regarding a pipe installed on their structure, however, the directional drilling option was chosen.

The pumping station will be equipped with an emergency overflow which will be connected to the existing storm sewer.

An impact study to fish and wildlife has not been requested during the EIA process.

The assumption that a small percentage of residents were equipped with back-up generators was based on the fact that in any typical surrounding (meaning all the homes anybody would be familiar with, in their circle of friends and families) and extremely low percentage would know anybody who would be equipped with a generator that is properly hooked up to the electrical entrance panel.

Operators will receive messages from SCADA, which will monitor the system 24/7. The protocol has not yet been determined and it will be developed in conjunction with the Certificate to Operate.

10.0 Email received on December 22, 2009

- 10.1 There is a small strip of property owned by the provincial government 851M west of Brideau Lane. It runs parallel to the playground at Jacquet River School and goes right to the beach.

It would increase the total distance of the in-land piping for the outfall by 1301M

$$\begin{array}{r} 851\text{M (Brideau Lane - proposed location)} \\ + \underline{781\text{M (Main Street to beach)}} \\ 1\ 632\ \text{M} \\ - \underline{331\ \text{M (less length of pipe from Main Street - Beach along Brideau Lane)}} \\ 1\ 301\text{M} \end{array}$$

However, it would increase the distance between the outfall and the Jacquet River Campground by an additional 750+M.

Because it is further up the cove it may also decrease the length of the in-water outfall pipe (a much more expensive component).

I hope this site is taken into considerations.

Other outfall locations were looked at in the past 10 years (varies from Jacquet River to other areas in Bay of Chaleur) and they all depended on the lagoon locations that were evaluating at the time. Brideau Lane, as indicated before, is the lowest point on Route 134 /Main Street between the Church and Legacy Road, so it is because of existing land elevations that Brideau Lane area always comes out on top when evaluating the most cost effective location for the outfall. This is also why the lagoon proposed in 1992, by another consultant, was located west of Brideau Lane in the field between the track and the shore line, just behind the houses on Brideau Lane. The lagoon would have to be in a completely different area to make another outfall point cost effective.

The outfall location proposed above would require the outfall to be approximately 1Km longer via the CN railway and approximately 1.6Km longer via route 134 and Msgr.

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Hickey. This option would also go against the natural slope of the ground and may require a lift station on the track option and definitely a lift station on the Main St option since the excavation would be over 15m deep at the intersection of Main Street and Msgr. Hickey by going gravity from Brideau to Msgr. Hickey. A lift station on a lagoon outfall is not cost effective and not recommended.

Even assuming that the corridor along the CN Rail would not require a lift station (this is very unlikely based on the available contour lines), the additional cost of the outfall pipe would be more than the possible savings if the outfall would be shorter.

We sincerely hope that the above addresses the concerns of the citizens and any other comments must be received on or before February 24, 2010.

David Hughes CAO