



# VILLAGE OF BELLEDUNE

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February 23, 2010

To Concerned Citizens of  
the Village of Belledune

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

Below are answers to the questions asked in the October 22 2009 document received by the Village of Belledune.

## **Appendix B**

### **11.0 Correspondence Dated October 22, 2009**

#### **Belledune West Sanitary Sewer System Environmental Impact Assessment Registration**

#### **SECTION 2**

#### **2.3 Purpose/Rationale/Need for the Undertaking**

1. What evidence can Mayor and Council put forth to validate claims that wells in the service area are contaminated with sewage or that "it is only a matter of time" before the groundwater is compromised due to failing septic systems?

*See 4.2 of February 8, 2010 letter*

2. Functional septic systems have a negligible impact on the groundwater quality in rural settings due to the dilution effect of the groundwater. Contamination of the groundwater from nitrogen loading is the main concern with respect to septic systems in suburban areas due to a higher density of these systems. Has the Village of Belledune conducted an analysis to determine if elevated levels of nitrate nitrogen are present in drinking water in the potential service area?

*No*

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

*See 4.5 of February 8, 2010 letter*

4. What percentage of septic systems within the service area is outdated and/or not functioning properly?

*We do not have access to this information.*

5. What evidence is there that “raw sewage” is present in the ditches along Main Street?

*See 7.3 of February 8, 2010 letter*

6. How many residents have the run-off pipe from their septic system illegally connecting into the storm sewers?

*See 4.3 of February 8, 2010 letter. Exact number is not known since all piping could not be videoed due to condition of piping system but it was confirmed that some are present. It is important to keep in mind that it is not only connections from the houses directly to the storm that is causing a problem, runoff from ditches going into the storm inlet pipes are also a contributing factor.*

7. What efforts have Mayor and Council / Department of Health made to prosecute illegal connections to storm sewers?

*The Department of Health was asked about Information of private systems but this department does not give specific information on private systems since it is privileged information*

8. What is the source of *E coli* in the storm sewer, Brideau Brook, and Armstrong Brook? Meaning, what tests have been done to determine whether the *E. coli* strains can be directly assigned to human waste or attributed to cattle due to poor, local farming practices? If this system is intended to “clean up the environment and improve the water quality in the brooks and streams”, should the Village investigate the actual source of the contamination? (see Rural Plan for sources of contamination in Armstrong Brook)

*Some of the area sampled (Church to track crossing) had the highest concentration levels and this area has no known farm runoff activity contributing to the storm inflow.*

9. Why did the Village of Belledune decide not to pursue a Septic System Management Program given the cost is more affordable and the willingness of area residents to participate?

*See 6.12 of February 8, 2010 letter*

10. What is the advantage to the environment of having the effluent of the 276 residential/commercial/institutional buildings which will be physically connected to the proposed system entering the Bay Chaleur? (Note: The EIA Registration and Application to Building Canada Fund states that approximately 370 residential

and commercial “units” would be connected to the system. The Preliminary Construction Cost Estimate indicates 276 actual connections)

*See 7.5 of February 8, 2010 letter*

## **2.4 Project Location / 2.5 Siting Consideration**

1. The Village of Belledune occupies a total area of 189 square Kilometers. More than 80% of the territory is occupied by forests. What is the rationale for locating the lagoon so close to residential properties?

*See 7.9 of February 8, 2010 letter*

2. What consideration did the Village of Belledune give to future development in their choice in locating the lagoon off Jacquet River Drive?

*See 7.10 of February 8, 2010 letter*

## **2.6 Physical Components and Dimensions of the Project**

1. Which type of low-pressure system is being proposed; STEP or GP?
  - a. If using a STEP system will the existing septic tank be used as a component of the pressure system? Who will inspect the current septic tank to ensure it is sound? If a septic tank needs to be replaced who will bear the cost of the removal and replacement of the tank? Who will be responsible for pumping the solids out of the septic tank – the property owner of the Village?
  - b. If using a GP system who will be responsible for the removal of the existing septic tank and weeping bed? Why was this option chosen given the higher capital costs over a STEP system? Concentrations of BOD and TSS are typically higher in a GP system (almost 3 x higher than a STEP system). How will the Village ensure it meets the effluent quality outlined in the new requirements?

*See answer to question 2 and 23 of October 29, 2009 letter to TRC.*

*Capital cost is not the only factor in calculating user rates, periodic cleaning of septic tanks also increases the user rates. There is also a major unknown in the conditions of the existing septic tanks (which is not available by the Department of Health). Determining the condition of each tank to confirm if it is leaking or not is a major undertaking and very costly, not to mention the fact that the work would have to be done on private property. The low pressure system eliminates this unknown and assures that there is no leakage of sewer from old tanks.*

2. Why does the current EIA Registration not include the installation of the sewer pipes, especially since the sewer pipes must cross Jacquet River and Armstrong Brook?

*See 9.2 of February 8, 2010 letter*

3. Does the proposed budget of \$7.1 Million include the installation of all components of the system (pumps, pipes, connections to vacant lots, construction, excavation, engineering costs associated with attaching the sewer pipes to the Jacquet River Bridge, etc) or is this a proposed budget for construction of the lagoon and outfall only?

*Calculated budget was as per available information at the time it was done.*

4. Why is there no emergency by-pass at the bottom of Jacquet River Hill in case sewage cannot be pumped over the top of the hill? What is the risk for residents living between Main Street to Noel Road (all hooked to a pressure system) should there be localized power? Will raw sewage be forced not their homes? Will the Village of Belledune be responsible for any damages due to negligence in not providing this safeguard?

*See answer to Q23 of October 29, 2009 letter to TRC*

5. If a bypass is subsequently proposed to mitigate the risk to homeowners west of the river an EIA if the by-pass is proposed to go through the estuary?

*This matter has been reviewed by the TRC and handled through the EIA review*

## **2.8 Operation and Maintenance Details**

1. "Proper" wastewater treatment will only be achieved with optimal operation of the entire system. Given a malfunction within the system due to a localized power failure an overflow pipe will discharge raw sewage directly into the Bay Chaleur. How will this system "minimize" the amount of solids polluting the receiving waters? What amount of solids is polluting the receiving waters currently? What is the source of these solids which are currently polluting the receiving waters?

*See 7.7 and 7.8 of February 8, 2010 letter*

2. How will the effluent be treated? Will it be sampled before it is discharged? Will the tests include presence of phosphates, nitrates and ammonia? What is the protocol if the scheduled discharge has elevated levels of any one of these chemicals?

*See 4.8 of February 8, 2010 letter*

3. If the wastewater leaving the lagoon to the outfall in the Bay Chaleur is "drinkable water", as repeatedly stated by Mayor Duivenvoorden, why is there a 300M radius closure of shell fishing?

*See 4.18 of February 8, 2010 letter*

4. 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)?

*See 4.18 of February 8, 2010 letter*

5. How will the Village deal with disruptions in service due to mechanical breakdowns and power outages? What about backups?

*See 9.2 of February 8, 2010 letter*

6. What type 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? If so, how many wells will be tested and at what radius from the sewage lagoon?

*See 3.20 of February 8, 2010 letter and the baseline testing of wells will be paid by the village*

7. 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 public wastewater management system?

*It is expected that the system as designed will not contaminate wells. Baseline well testing will be done provided property consent is given. This would be largely an insurance and legal issue in any case but one would assume that any well not pre-tested would not be able to make a direct link to the sewer as the cause.*

### **Community Structure (Socio-economic)**

1. Specifically, what action will the Village of Belledune take against residents who cannot pay their user fees or repay loans provided for installation costs?

*See 4.8 of February 8, 2010 letter and the Village of Belledune will address the operation of the Sewer Utility in a Sewer Utility By-law, including the measures for collecting and recovery. Non payment for a period of sixty days constitutes a special lien and charge on such land. Other action for collection that may be exercised by the Village of Belledune includes collections agencies and courts if necessary.*

2. How will the nonpayment of services by residents be accounted for in the operation and maintenance of the system? A lien on property does not translate to dollars in the operating fund so how does the Village of Belledune propose to cover shortfalls in the operating budget should these shortfalls be due to the inability of resident to meet the financial burden of this system?

*Non payment by residents resulting in shortfalls in the operating fund at year end will have to be picked up in the second next ensuing year as an expense. (There*

*is the option to spread deficits over four years to balance budgets). The sewer utility will carry a balanced budget and shortfalls will be reflected in subsequent ensuing years in the user rates to cover the annual budget. To address funding shortfalls (cash flow) for operations, municipalities can borrow temporarily in each year for current expenditures.*

3. Will the Village apply to Capital Borrowing to cover shortfalls? If so, how will the Village ensure that the burden of these loans are not distributed to residents who are not hooked onto the municipal system? If the Village does not apply to Capital Borrowing will the funds be taken from the Village's Operating Budget?

*All the costs of the sewer project (capital, operating & maintenance) will be carried by the Sewer Utility Operating Fund. Capital Borrowing will be used to address the municipalities share of the capital cost and will have no bearing on the residents not within the service area of the system nor will it have any impact on the General Operating Fund Budget.*

4. Where will the financing come from for the Village of Belledune to provide loans to finance hook-up fees? How will the Village of Belledune meet its repayment demands should people default on personal loans from the Village?

*The Village of Belledune will look at short term financing to provide loans for finance hook-up. Legal agreements will be drafted between the Village of Belledune and the borrower. Non payment for a period of sixty days constitutes a special lien and charge on such land. Default of payment will be handled in a similar way as other financial institutions would handle, including collections agencies and courts if necessary.*

5. Will the loans provided by the Village of Belledune for hook-up include the entire costs (i.e. installation of sewer pipe, rock excavation, topsoil, seeding, repair/removal of septic tank, electrical work required for pump, etc?)

*Loans by the Village of Belledune for hook up will be in accordance with the request from the borrower and the amount and term agreed upon by both parties.*

6. What will be the average increase in property assessments within the Village of Belledune should a public wastewater management system be imposed on residents?

*See 3.24 of February 8, 2010 letter*

7. Will the Village of Belledune increase the municipal tax rate to meet the financial burden of paying for the capital costs of the installation of a wastewater management system?

*The General Operating Fund (which establishes tax rate) and the Sewer Utility Fund (which establishes user rate fees) are separate funds as per municipal regulations; therefore the municipal tax rate will not be impacted by the capital costs of wastewater management system.*

8. What is the actual number of residential, commercial and institutional connections? Is there a difference between actual connections to the system and the number of “units” along the service route?

*See table at the end of the October 29, 2009 letter to TRC*

9. What is the proposed “user fee” for the following:
- Developed residential lot?
  - Developed commercial lot?
  - Developed lot with dwelling set back greater than 50 Meters?
  - 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 setback distance of their home?

*The estimated user fee is \$600 per unit. The detail fee structure regarding the various development categories will be addressed during the preparation of the Sewer Utility By-law*

10. Will the Village of Belledune charge a “frontage fee” for the installation of sewer pipes?

*No*

11. Where is the set-back distance measured from? Meaning, is it measured from the property line to the building or the property line to the connection?

*The property line / street right-of way which are the same.*

12. Was a cost-effectiveness analysis performed to ensure that the construction and the operation and maintenance costs are reasonable and appropriate given the financial constraints of the residents?

*Calculated budget was as per available information at the time it was done.*

13. What basis do Mayor and Council have for stating that the lack of a municipal wastewater system prevents development in the proposed service area? If this is the case why does the application go on to state that 1% growth per year will “more than satisfy future growth in the Village of Belledune”?

*See 6.3 of February 8, 2010 letter and 1% annual growth is an design standard accepted by the DOE*

14. How will the Village finance any cost over-runs (for example, cost of rock excavation for installation of the lagoon or sewer pipes) or components not included the current budget but recommended by the Department of Environment

(for example fencing around the lagoon, digging test wells around the lagoon, back-up generators for the pumping station, etc.)?

*Cost overruns, if any, can be handled in a number of ways. Scaling back the project etc. However until the tender bids are actually received, the exact cost of construction is not known since thus far the project budget is based on an opinion of cost as with all other projects.*

### **Valued Spaces/Locations**

1. Why was the outfall pipe moved to its current proposed location at Brideau Lane from the proposal location at Legacy Road given the potential risk to one of only two public beaches within the Village, 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?

*See 7.12 and 10.1 of February 8, 2010 letter*

### **Air Quality / Physical (Climate/Atmosphere)/ Lifestyle and Quality of Life**

1. Will the Village of Belledune conduct an odour impact analysis prior to operation of the proposed wastewater management system?

*See 6.43 of February 8, 2010 letter*

2. Because of potential for odour from the pump station, how does the Village propose to control odour (i.e. scrubbers, air release valves, will it vent to a soil bed?, etc.)

*Pumping Stations will be built with standard vents on wet wells which is the approved standard practice for these types on installations. Furthermore, these proposed locations of the Belledune stations are much further from residential areas than many existing stations in other municipalities.*

3. 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 a 500 Meter radius around the lagoon?

*See 4.14 of February 8, 2010 letter*

4. 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?

*See 4.16 of February 8, 2010 letter*

5. Roy Consultants recognizes the potential of the blowers located at the lagoon to produce noise. Why is Roy Consultants proposing the use of blowers instead of submerged agitators which generate less noise?

*See 7.11 of February 8, 2010 letter*

### **Biology and Ecology / Physical**

1. What impact will installation of the sewer pipes have on the sensitive and important coastal habitats of the 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 9.13 of February 8, 2010 letter*

2. The bank of the beach at Brideau Lane (the proposed location of the outfall pipe) is extremely unstable and eroding. What measures are being taken to protect property owners from further degradation of their property? And what will protect the outfall pipe from potential damage due to the instability of the bank?

*See 6.17 of February 8, 2010 letter*