Project: Establishment of an Engineered Landfill at Danford Lake in the Municipality of Alleyn-Cawood



Brief on the Transportation and Commuter Safety Of the Proposed Danford Dump

Brief Presented to BAPE By Ed Masotti, recreational property owner, Neil Lake, since 1980

Introduction

This brief deals with concerns relating to Transportation, as follows:

- **1**. Garbage defined by LDC (Outaouais and surrounding MRCs). How much garbage, from where and in what type of trucks?
- 2. Impact from the closing of the Cantley & Perkins dumps:
 - a. Does this comprise the missing 110,000 tons of garbage?
 - b. How much garbage is currently going there?
 - c. How much of this garbage is from Ontario?
 - d. How viable is LDC's proposal without Ontario (Cantley & Perkins) garbage?
 - e. How many trucks will there be due to this garbage?
- 3. The impact on traffic due to Recycling, Auxiliary Services and Day-to-Day Operations.
- **4.** What is the impact of all of the extra dump traffic on Highway 105 from Wakefield to Kazabazua?
- 5. What is the impact of all of the extra dump traffic on the Village of Danford Lake?

Note. Annex "A" lists the written questions submitted to BAPE. The answers are critical to answering questions 1 & 2 above. The annex reflects the status as of June 5, 2007 at 5:00 p.m. I had to cut off looking for answers in order to produce the report for submission on June 8^{th.} Unfortunately, none of my questions have been answered as of the cut-off date. I am writing this brief on my analysis of the situation and I will decide if it needs to be revised once the questions have been answered.

Acronyms you will find in this document:

CRC	Construction, Renovation and Demolition Waste
ICI	Industrial, Commercial and Institution Waste
RMW	Residential Municipal Waste
7-ton truck	Smaller trucks carrying waste. Seven (7) tons is the average load on these trucks. This is defined by LDC and the City of Gatineau.
27-ton truck	Larger trucks carrying waste. Twenty-seven (27) tons is the average load on these trucks. This is defined by LDC and the City of
Perkins dump	Also referred to as Val-des-Monts.

1. Garbage defined by LDC (Outaouais and the surrounding MRCs). How much garbage, from where, and in what type of trucks?

During the Q&A, and subsequent submissions by the various participants, it was determined that there is a limited market (at the public level of MRCs and Municipalities) for the Danford Dump outside those already defined by LDC.

- Catherine Lussier stated that Antoine-Labelle had no intention of sending their waste to the Danford Dump. A letter was tabled by Antoine-Labelle with BAPE stating it has no intention of sending waste to the Danford Dump (ref. DB1.pdf)
- Though not explicitly stated, MRCs bordering the Outaouais are unlikely to send its waste to the Danford Dump the distances are too long, and other more viable options are available to them.
- Andre Poulin of LDC said at the May 16th Wednesday evening session that it is unlikely that the MRC Papineau would send its waste to the Danford Dump, given its proximity to LET Lachute. It is assumed that it will renegotiate its contract with LET Lachute when it expires on December 31, 2011.

That leaves the City of Gatineau, and the MRCs Collines, Gatineau Valley and the Pontiac which could send their garbage to the Danford Dump.

Annex "B" is a brief analysis of how much garage there would be from the various MRCs, the City of Gatineau and from private contractors in the ICI and CRD sector.

A synopsis of Annex "B" is:

- The City of Gatineau and the MRC Gatineau Valley and the MRC Collines are doing better than expected in meeting the 2008 recycling targets in the RMW sector
- The City of Gatineau will lose its ICI sector to the Danford Dump regardless of whether it opts in or out of the Danford dump
- The MRC Pontiac is behind the other players and only modest gains in recycling is expected
- The CRD and ICI is not controlled or monitored by anyone and those Sectors are expected to make only modest gains in recycling
- All RMW waste from the City of Gatineau and the MRC Collines will come in 27 ton trucks
- All RMW waste from the MRC Gatineau Valley and the MRC Pontiac will come in 7 ton trucks

• All the remaining CRD and ICI waste will come from private contractors, and all of this will be delivered mostly in 7 ton trucks, except for the City of Gatineau (80% in 7-ton trucks and 20% in 27-ton trucks).

The amount of garbage and related traffic estimated by LDC is shown in the following table:

Provenance Trajet routier		Tonnage annuel (tonnes)	Nbre total de passages annuel (aller-retour)	Nbre de passages par jour ouvrables
MRC du Pontiac	1) Otter Lake au LET (par la 301)	11 400 ⁽¹⁾	3 257	13
Ville de Gatineau, MRC des Collines-de-l'Outaouais, 1/6 de la MRC de La Vallée-de-la- Gatineau	2) la route 105 au sud de Kazabazua	10 950 ⁽¹⁾ 160 500 ⁽²⁾	15 018	58
MRC d'Antoine-Labelle, 5/6 de la MRC de La Vallée-de-la- Gatineau	3) la route 105 au nord de Kazabazua	54 750 ⁽¹⁾ 13 100 ⁽²⁾	16 614	64
_	4) Kazabazua au LET (de Danford Lake par la 301) (somme de 2 et 3)	65 700 ⁽¹⁾ 173 600 ⁽²⁾	31 632	122

Tableau 6.6 : Nombre de passages acheminés au LET en fonction de la provenance

(1) Par camion de collecte de 7 tonnes

The following table shows the difference between LDC's and my estimate of how much garbage there is and what type of trucks it is coming in.

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Brief on the transportation and commuter	safety of the
Proposed Danford Dump	

Garbage identified by LDC											
					Daily 7	Fruck trips					
Source of	Type of Waste	LD	C esti	mate		My estimate					
frucks			Tri	icks f	rins		True	ks fr	ins		
II UCKS		Tons	27	7	A11	Tons	27	7	A11		
			21		All		27	/	All		
		105.000									
City of	KMW	135,000		0	- 38	40,177	13	22	13		
Gatineau	CRD					15,000	1.5	12	13		
	CIU .	135,000	38	0	38	86,177	15.5	34	49.5		
MRC	RMW	24,000	8	0	8	6,324	2	0	2		
Collines	ICI					0			0		
connes	CRD					7,000	0	8	8		
		24,000	8	0	8	13,324	2	8	10		
		11,000	0	12	12	4 844	0	5	5		
1/6 of Gat	All three types of waste	11,000	·····	14		7,017	, , , , , , , , , , , , , , , , , , ,	·			
valley		11 000							-		
		11,000	0	12	12	4,844	0	5	5		
0						101015	10				
Comir	ig up from Wakefield	170,000	46	12	58	104,345	18	47	65		
									,		
5/6 of Gat	All three types of waste	55,450	0	60	60	24,221	0	27	27		
Valley		,				,		1			
	ntoine-Labelle	12 400	4	0	4						
	altome-Laberre	12,400									
Going	through the Village	237.950	50	72	122	129 566	19	74	02		
Going	un ough the viriage	207,000	50	12	166	120,500	10	14	92		
									-		
MRC Pontiac	All three types of waste	11,400	0	13	13	12,000	0	13	13		
All	going to the dump	249,250	50	85	135	140,566	18	87	105		

The above table shows that I think LDC has overestimated the garbage from these sources by 110,000 (249,250 LESS 140,566). This may be because LDC used Table 2.3 (what was being put in landfills at the time the Waste Management Plans were written) versus using Table 2.4 (the amount of garbage put in landfills after the 2008 targets are met).

In the rest of this document I will use the phrase "Garbage identified by LDC" to mean the 140,566 tons I think is to be sent to the Danford Dump, not the 249,250 tons estimated by LDC.

2. Impact of closing the Cantley & Perkins dumps:

- a) Does this comprise the missing 110,000 tons of garbage?
- b) How much garbage is currently going there?
- c) How much of this garbage is from Ontario?
- d) How viable is LDC's proposal without Ontario (Cantley & Perkins) garbage?
- e) How many trucks will there be due to this garbage?

a) Does this comprise the missing 110,000 tons of garbage?

There is a considerable amount of garbage -110,000 or so - that is missing from the LDC Environmental Assessment. I believe that the garbage currently going to the Cantley and Perkins Dumps will make up a lot of the missing garbage from their study.

My written questions to the BAPE were intended to show how much garbage is currently going to these two dumps, and of that amount, how much of the garbage originates from Ontario. Given that my written questions have yet to be answered (and one was deemed outside the scope of the enquiry), I have to use other means to determine this.

LDC is portraying the dump as a regional solution for the Outaouais MRCs and the City of Gatineau. However, LDC has made no serious attempt to obtain a regional consensus. Alienating your prime customers is a strange way of going about trying to get approval. However, LDC has said it would go ahead with the Dump if all the MRCs and the City of Gatineau opted out. WHY?

b) How much garbage is currently going there?

The Ministry of Environment (Mr. MBaranga) tabled the number of trucks going to these two dumps at the May 17th evening BAPE Q&A session. Unfortunately, BAPE is unable to release it due to the sensitive nature of some information contained in the tabled material.

I did a series of surveys of Quebec Companies going from Ontario to Quebec with "recycled material". This is legal, as long as over 50% of the material is recyclable. These surveys are in 4 parts, and are in Annex "C".

This section of the report deals with Annex "C2 - Survey of all dump trucks going to the Cantley". The pictures in the Annex show how many and what type of trucks went to the Cantley Dump on November 27, 2006 from 8:00 a.m. to 4:30 p.m. The number of trucks recorded agrees with the number from the Mayor's office in Cantley, which independently came up with an estimate of at least 30 trucks daily.

Annex "C2" also summarizes what types of trucks are going to the Cantley dump. Based on this, I am estimating there are 30 trucks daily or 60 truck trips in all:

- There are twenty-six (26) 7-ton trucks going to Cantley each day. Because Cantley charges by the truck, not by the ton, the loads on these trucks could be heavier. Regardless, using the 7-ton average, this works out to 47,320 tons per year.
- There are four (4) 27-ton trucks daily, resulting in 28,080 tons per year.

Therefore, the total diverted from Cantley to the Danford Dump would be 75,400 tons per year.

I have no idea how much garbage and how many trucks go the Perkins dump each day. In Annex "C1" there are pictures of trucks from "Demolition Outaouais". These trucks go to the Perkins dump. I recorded three going to Quebec with a load – OR 1 truck per hour. If I estimate there are 8 full trucks going to Quebec each day that works out to 14,560 tons per year, just from one firm. I don't know how many other firms go to Perkins.

I am assuming that there is 20,000 tons going to the Perkins dump, all of it in 7-ton trucks – that makes 11 trucks a day, or 22 truck trips a day.

The overall conclusion I make is that most (I assume the 15,000 of CRD in the City of Gatineau goes to these dumps) of this garbage has not been counted by LDC. This garbage could go directly to the Danford Dump. <u>What you see in Annex C2" are trucks that are coming from the private contractors own triage centers.</u>

Therefore, we must add to the traffic on Highway 105 from Wakefield to Kazabazua and to the Village of Danford Lake:

- 8 truck trips of 27 ton trucks; and
- 74 truck trips of 7-ton trucks

c) How much of this garbage is from Ontario?

I have estimated that there is probably 95,000 to 100,000 tons of garbage going to the Cantley and Perkins dumps. Of this, I assume that the 15,000 tons of CRD garbage I identified for the City of Gatineau (see previous table called "Garbage Identified by LDC") is sent to the Cantley or Perkins dumps. That leaves about 80,000 to 85,000 tons of garbage going to Cantley and Perkins that is un-accounted for.

Garbage from Ontario makes up a good portion of the remaining garbage going to the Cantley and Perkins dumps. <u>A realistic estimate would be 40,000 to</u> <u>50,000 tons per year.</u>

Once the BAPE documentation package became available, it was evident that I was not the only one concerned about Ontario garbage. On December 11, 2006 a Ministry of Environment official (Mr. Marc Dubreuil) noted in his feedback on the Environmental Assessment that LDC would probably need to accept garbage from Ontario is order to be viable. The official also felt that it would be difficult to control, given its geographic proximity to Quebec.

I did three surveys to determine how much of the 100,000 tons or so of garbage going to Cantley and Perkins could be coming from Ontario. The results follow.

Companies	Go Qı	ing to ıebec	Comi Qu	Total	
	Full	Empty	Full	Empty	
Condor	3			3	6
Myral	5		2	3	10
Waste Management	1				1
Malex	2			2	4
Demolition Outaouais	3			1	4
Godmaire		2		1	3
Other		4			4
TOTALS	14	6	2	10	32

C1 "Survey (take pictures or video) of all Quebec private contractor traffic between the two provinces". This was done on Nov 27 from 9:30 a.m. to 12:30 p.m.)

These surveys show that there is a constant stream of waste-related truck traffic crossing the two bridges between Ottawa and Gatineau.

There were 16 trucks on each of the bridges

Twenty of these trucks were going to Quebec

Most (14 of 20) of the trucks going to Quebec from Ontario were full. Of the remaining 6:

- Two (2) trucks going to Quebec had no box. It could be a box was being dropped off in Ontario, and there was no full box to take back
- Four (4) with empty boxes I have no explanation for these.

There were 12 trucks coming from Quebec to Ontario

- Two (2) were full and I have no explanation for these.
- Of the remaining 10, all were coming over with empty boxes. This probably means either a drop off <u>OR</u> a drop off and pick up of a full container.

Let us use the 14 full trucks going over to Quebec to calculate how much garbage this could mean:

- 14 trucks in 3 hours = 52 trucks over a 10 hour day. Round down to 40 trucks (as my second survey to confirm the first survey result had slightly fewer trucks).
- Over 260 days, that means 10,400 trucks
- Each truck carries 7 tons, at least half of which should be recyclable.
- Therefore, 10,400 trucks carrying 3.5 tons of garbage equal almost 34,320 tons of Ontario garbage going into Quebec dumps.

Does anyone think there is only 3.5 tons of garbage in each of these trucks? I have been told that the Demolition Outaouais trucks go directly to the Perkins dump! Therefore, there is probably in the order of 40,000 to 50,000 tons of Ontario garbage going to the Cantley and Perkins dumps.

C3 Followed trucks to see where they are going

Annex "C6" shows the location of City of Gatineau's two main transfer stations and the location of the private transfer stations. As you will note, these are located in the north part of Alymer (on Vernon Road off Pink Road) or in what used to be called Gatineau before amalgamation. Most of them are within 45-50 minutes of the Danford Dump.

Annex "C3" show pictures of each voyage described below.

- I followed two trucks from Ontario to Gatineau to see where they would go. One went to the Myral transfer station; it was carrying CRD waste and recycle material.
- I also followed one MALEX rear loading garbage truck which did a pickup in Ontario of ICI waste in Ottawa and went to the Gatineau's "Usine d'epuration" centre at the end of St. Joseph Boulevard.
- A friend of mine, Paul Dingledine, also followed a truck to the Condor transfer station.

The two trucks going to the company transfer stations show that the waste and recycled material is being triaged. The trucks going to the Cantley dump (see Annex "C2") are from these transfer stations.

C4 I repeated step C1 to ensure our first sample is representative. The numbers were slightly lower - 11 in the three hours versus 16 during the three hours on November 27th. See Annex "C4".

d) How viable is LDC's proposal without Ontario (Cantley & Perkins) garbage?

Garbage identified by LDC means that LDC will lose money. Garbage from other sources not identified by LDC (Cantley, Perkins and by default, Ontario) allows LDC to make a profit.

Annex "C5" contains a brief analysis of the annual operating revenue and costs for the dump. To summarize:

LDC's Annual Cost	Costs
Land purchase financing	\$1,500,000
Dump set-up costs financing	\$3,000,000
Operating costs	\$1,500,000
Capitalization of post-closure fund	\$600,000
\$2.00 / ton to MRC Pontiac	\$500,000
\$2.00 / ton to Allyen & Cawood	\$500,000
TOTAL ANNUAL COSTS	\$7,600,000

The revenue from the sources identified by LDC is:

Revenue from sources identified by LDC											
Market sector	Ton/year	Tipping fee	Total Revenue								
The City of Gatineau - RMW	46,177	\$30	\$1,385,310								
The City of Gatineau -ICI	25,000	\$50	\$1,250,000								
The City of Gatineau - CRD	15,000	\$65	\$975,000								
MRC Collines - RMW & ICI	6,324	\$30	\$189,720								
MRC Collines - CRD	7,000	\$65	\$455,000								
MRC Gat Valley - RMW	3,065	\$30	\$91,950								
MRC Gat Valley - ICI	20,000	\$50	\$1,000,000								
MRC Gat Valley - CRD	6,000	\$65	\$390,000								
MRC Pontiac - RMW	4,000	\$30	\$120,000								
MRC Pontiac - ICI	4,000	\$50	\$200,000								
MRC Pontiac - CRD	4,000	\$65	\$260,000								
Total	140,566		\$6,316,980								

LDC will need a significant portion of the garbage currently going to Cantley and Perkins to be viable; Ontario garbage of 40,000 to 50,000 provides revenues of \$2,600,000 to \$3,250,000 and therefore is needed if LDC is to be viable.

3. How many trucks due to Recycling, Auxiliary Services and Day-to-Day Operations?

Day-to-Day Operations:

It should be noted that every foot of material (like sand or clay) added to the sub-structure or to the top of each cell will result in a lot of trucks. I am assuming that it will be material obtained locally and each truck would average 8 yards of sand or clay.

If delivered on a "just in time" basis, this will result in:

- 2.5 trucks per day if the foot is added to the base
- 2.9 trucks per day if the foot is added to the mountain of garbage

A cell is closed every 3 years and the next one is started. If the whole cell base is developed at one time, this will mean a large number of trucks during a 3 or 4 week period:

- 5,054 trucks if the foot is added to the base
- 6,116 trucks if the foot is added to the mountain of garbage

I am assuming the Cells will be developed on a "just on time" basis. While the whole base of one Cell must be covered as quickly as possible, LDC will just stay one or two weeks ahead of the garbage to reduce potential damage to liners, etc.

Annex "D" is an analysis of the number of trucks that would be needed for the day to day operations of the dump.

Day to Day Operations	Daily number of trucks	Daily number of truck trips
Sand for Cells	8.5	17
Stone for bio-gas collection	2	4
Operations & Maintenance	2	4
Soil for Cell covering	0	0
Manufactured cell products	0	0
TOTAL	12.5	25

Recycling and Auxiliary Services:

Operations Recycling Aux – Unknown Aux – Wood curing	Daily number	Daily number of truck trips			
	OI HUCKS				
Recycling	2	4			
Aux – Unknown	10	20			
Aux – Wood curing	2	4			
Aux – Compost Platform	2	4			
TOTAL	16	32			

Annex "E" is an analysis of the number of trucks coming daily due to Recycling and Auxiliary Services.

The Auxiliary – Unknown would originate from Gatineau and Ontario and therefore affects Highway 105 from Wakefield to Kazabazua. All the rest is probably local and would affect the Village of Danford Lake.

The following table shows how LDC and I differ on the estimate of Trucks.

Compare LDC estimate of truck trips to my estimate of trucks														
	Al	All truck trips identified by LDC All truck trips identified by								me				
Where are the trucks coming from?		LDC Universe		Cantley, Perkins & Ontario		Recycle, Auxiliary & Operations		LDC Univers e		Cantley, Perkins & Ontario		Recycle, Auxiliary & Operations		Total trucks
		7	27	7	27	7		27	7	27	7	27	7	
Ottawa and City of Gatineau	38	0	0	0	0	0	38	16	34	8	74	20	0	152
MRC Collines	8	0	0	0	0	0	8	2	8	0	0	0	0	10
one sixth (146) of Gatineau Valley	0	12	0	0	0	0	12	0	5	0	0	0	0	5
Traffic from Wakefield to Kazabazua	46	12	0	0	0	0	58	18	47	8	74	20	0	167
five sixth ^(5#6) of Gatineau Valley	0	60	0	0	0	0	60	0	27	0	0	0	37	64
Antoine-Labelle	4	0	0	0	0	0	4	0	0	0	0	0	0	0
Traffic through the Village	50	72	0	0	0	0	122	18	74	8	74	20	37	231
MRC Pontiac	0	13	0	0	0	0	13	0	13	0	0	0	0	13
All know trucks going to the dump	50	85	0	0	0	0	135	18	87	8	74	20	37	244

The following information is used in section 4 and 5 which follow. In evaluating the impact on Highway 105 and the

Village of Danford Lake,	I will just look at my estimates.
Therefore, a different way	y of looking at the above table is:

My Estimate of Trucks Trips Passing Through										
	Lo	w Qu	iebec		Village of Danford Lake					
Source of trucks	Garbage (tons)	27 ton	7 ton	Total	Garbage (tons)	27 ton	7 ton	Total		
Garbage identified by LDC	99,501	18	47	65	128,566	18	74	92		
New "Market" - Cantley, Perkins & Ontario	95,400	8	74	82	95,400	8	74	82		
Recycling, Auxiliary Services and Day to Day Operations	n/a	20	0	20	n/a	20	37	57		
Total – all truck trips	194,901	46	121	167	223,966	46	185	231		

4. What is the impact of all of the extra dump traffic on Highway 105 from Wakefield to Kazabazua?

How much traffic is there now on Highway 105 from Wakefield to Kazabazua? How does the dump traffic affect the current traffic on Highway 105 from Wakefield to Kazabazua during the hours of operations?

Annex "K0 through K12" provides details on three traffic surveys done in Low Quebec during the hours of operation (from 7:00 a.m. to 6:00 p.m.) and accident information. Annex "K13" is a summary and impact of the dump traffic; this is a summary:

My survey results - during 7:00 a.m. to 6:00 p.m.				
Type of vehicles	January	February	March	
Public & Emergency	34	63	45	
Logging & Flat Bed	56	96	66	
Dangerous	13	18	10	
Transport	130	165	103	
Passenger	1,865	2,022	2,744	
Total	2,098	2,364	2,968	
Trucks observed in above				
- small trucks (7-tons)	116	146	81	
- large trucks (27-tons)	117	196	143	
total trucks	233	342	224	
Estimate of dump traffic				
- small trucks (7-tons)	121	121	121	
- large trucks (27-tons)	46	46	46	
total trucks	167	167	167	
Statistics				
Overall increase in all traffic	8%	7%	6%	
Overall increase in all trucks	72%	49%	75%	

104%

39%

83%

23%

Note. March survey was during load restrictions.

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Overall increase in small trucks

Overall increase in big trucks

How many accidents are there currently?

Severity	2002	2003	2004	2005	2006	Total
Death	2	3	0	2	3	10
Grave Injury	4	12	5	9	8	38
Light Injury	28	29	26	16	18	117
Damage > \$500	118	114	131	139	136	638
Damage <= \$500	24	27	18	43	36	148
Totals	176	185	180	209	201	951

The following table & graph provides an overview of accidents:



As you can see, accidents are going up, in spite of Ministry of Transport, Quebec initiatives to reduce them during this period. My colleague, Mr. John Edwards will elaborate more on this.

How many more accidents will the additional dump truck traffic cause?

Trucks were involved in 114 of the accidents. The Dump traffic will result in a 65% increase in ALL truck traffic during the hours of operation (average out the three increases 72%, 49%, 75%). Sixty-five 65% of 114 accidents will result in 74 accidents. Assume that only 60 of these are during the hours of operation – 7:00 a.m. to 6:00 p.m. – and you get the following over the next 5 years:

Severity	Increase
Death	1
Grave Injury	3
Light Injury	7
Damage > \$500	40
Damage <= \$500	9
Totals	60

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5. What is the impact of all of the extra dump traffic on Highway 301 (from Highway 105 to the dump) and especially for the Village of Danford Lake?

How much traffic is there now in the Village of Danford Lake? How does the dump traffic affect the current traffic in the Village during the hours of operations?

Annex "L1" provides a summary of three traffic surveys done in the Village during the hours of operation (from 7:00 a.m. to 6:00 p.m.). The summary and impact of the dump traffic is as follows:

My survey results - during 7:00 a.m. to 6:00 p.m.				
Type of vehicles	February	March	April	
Public & Emergency	30	23	18	
Logging & Flat Bed	136	151	23	
Dangerous	5	0	2	
Transport	24	23	13	
Passenger	262	293	331	
Total	457	490	387	
Trucks observed in above				
- small trucks (7-tons)	36	36	33	
- large trucks (27-tons)	152	161	23	
total trucks	188	197	56	
Estimate of dump traffic				
- small trucks (7-tons)	185	185	185	
- large trucks (27-tons)	46	46	46	
total trucks	231	231	231	
Statistics				
Overall increase in traffic	51%	47%	60%	
Overall increase in all trucks	123%	117%	413%	
Overall increase in small trucks	514%	514%	561%	
Overall increase in big trucks	30%	29%	200%	

The April survey was done while load restrictions were in place. Therefore, logging and flat-bed trucks were greatly reduced. So the few weeks of rest that the Village used to get from trucks will disappear! It is also obvious that the quality of life and safety will be compromised.