

## *Report to the Core Area Liquid Waste Committee*

Events that have unfolded since amendment #7 to the Core Area Liquid Waste Management Plan was sent to the province, have added to my concerns about the current sewage treatment project and the processes that created it. On January 27, the CRD Core Area Liquid Waste Committee received two reports from consultants indicating that opportunities for resource recovery at the University of Victoria and in the James Bay area could not be economically realized. This was very surprising since these “opportunities” had been strongly promoted as a “green feature” of the project for a considerable period of time. In the case of UVic, it would appear the fact most UVic buildings are connected by a high temperature natural gas system incompatible with lower temperature sewage heat remained “undiscovered” for a considerable period of time. Similarly, the legislative buildings had been promoted as a prime opportunity in the James Bay area even though the precinct is currently heated by a very high temperature steam system that, if anything, is even less suitable for lower grade sewage heat. Conversion could only come at great expense and considerable disruption.

On April 28, 2010, two concerned citizens presented information from the CRD’s own data to the Core Area Committee demonstrating that system capacity has been designed around out of date flow data that over estimates current and potential future flows by as much as thirty percent. This also came as something of a shock since one would assume that project designers had used the most current flow data available.

Total flows are, of course, one of the critical factors that determine the size of treatment facilities that need to be built. Another critical factor is “organic” load and the subsequent biological oxygen demand (BOD) that treatment facilities must deal with. Recently, the same two citizens suggested that a program aimed to reduce the organic load in the system might, in combination with lower flows, allow a system to be built with considerably reduced capacity. Reducing the capacity of the facility constructed usually results in savings. Since, in the CRD project, available sites for central plants are constricted, savings could be dramatic. Meaningful reductions in capacity could result in one or more expensive satellite plants becoming redundant. Eliminating these plants could result in savings of more than a hundred million dollars.

These issues are substantive and should be cause for concern. Especially, when they follow other significant issues including:

- The lack of an open design process that considered other potential architectures beyond the current “big trunk” system and allowed the “best and brightest” ideas to come forward. Since due diligence with regard to other design approaches has never been done, there can be no confidence that the current project represents the best approach.
- The lack of any opportunity to bring the comments of Dr. Bruce Jank forward when he apparently became concerned with the direction the project was taking (Dr. Jank had been retained in order to provide advice and an independent “second look” to the Core Area Committee).
- A failure to make meaningful use of the Technical and Citizens Advisory Committee (TCAC) as a resource for the Core Area Committee (Over a three year period, almost nothing was received by the Core Area Committee from TCAC).
- The fact that the project proceeded for an extended period of time centered around a site for the central plant that had not been secured and eventually was determined to be unavailable.

- With the possible exception of the Western Communities, no apparent connection between project design and future regional changes projected by the Regional Growth Strategy (RGS).
- Concerns about the adequacy of the public consultation process. Especially in regard to site selection in Saanich East/North Oak Bay (SENOB).
- Concerns about the adequacy of dialogue with The University of Victoria (UVic) during the SENOB site selection process.
- Inconsistencies in the evaluation Matrix used to establish Option 1A as the preferred option.
- Selection of a bio-solids processing strategy that: requires considerable land area, depends on markets that are not securely established, promotes the mixing of sewage sludge with clean organics and offers land filling at Hartland as a backup. The decision to mix sewage sludge with clean organics in the region makes it unlikely that the considerable residue from the digestion process will be accepted for land application, its natural market.
- The lack of any apparent cost/benefit analysis on a project projected to cost nearly a billion dollars and/or the lack of any comprehensive “net environmental benefit” analysis.

It would appear that a decision to build the project around the existing “big trunk” architecture was made very early in the planning process. In turn, this decision precluded any opportunities to see if alternative architectures, plant locations and technologies might have been able to provide better environmental and financial outcomes. Of particular concern, the project was planned in isolation with little attention to an Integrated Resource Management (IRM) approach to regional waste streams. In fact, resource recovery seems to have been treated as an “add on” and is hardly realized at all in the current project. A more logical approach might have designed the sewage treatment project around four basic goals:

- To maximize environmental benefit (The region was, after all, mandated to move to treatment for environmental reasons). Most certainly, the project should have aimed at creating an optimal response to provincial climate change goals.
- To accomplish maximum environmental benefit at the lowest net cost to taxpayers. At present, the net cost to taxpayers will be high and there has been no opportunity to investigate other approaches that might have provided a lower net cost.
- To insure maximum flexibility to respond to future regional development as well as industry innovation in technology and design. It is likely that the treatment industry will undergo a great deal of innovation in both technology and system design in the next twenty to thirty years. In addition, the RGS suggests dramatic redevelopment of substantial parts of the CORE area. The design of the system should provide opportunities to take advantage of this redevelopment. Unfortunately, the current proposal does not appear to do so.
- To establish phasing so as to fit into a fiscal framework that does not constrain the ability of the CRD to undertake other, arguably more important, initiatives. The current proposal will result in dramatic tax hikes for substantial parts of the CORE area by 2016. This will make it very difficult to deal with other pressing issues such as transportation.

As detailed above, there is little evidence to suggest that the current project was designed around any of these goals. Not surprisingly, it does not seem to come close to accomplishing any one of them. For this

reason, the project, as currently proposed, would appear to be a poor way to spend scarce regional and provincial tax dollars.

Collectively, these issues and concerns must be seen as very significant. The Core Area Committee is poised to carry out a project involving what is likely the largest single expenditure this region has ever undertaken. The project will have huge implications for the future direction of the region as well as its ability to address a myriad of complex and costly additional concerns. It is critical that the Core Area Committee get this project right. It is certainly past time to take “a long sober second” thought at the project as it now exists. With this in mind, I am suggesting the following approach.

That as Phase 1 of the project, the Core Area Committee undertake to work with staff, other CRD committees and the province to evaluate the current proposal against the four basic goals described above. Such an evaluation should include an **analysis of net environmental benefit** as well as a **cost benefit analysis**. That as a second part of Phase 1, the committee undertake the following specific actions, as soon as possible, to investigate alternative approaches and address at least some issues of concern for receiving waters:

- Immediately begin investigation of a comprehensive Integrated Resource Management (IRM) strategy for all waste streams, including sewage and insure that such an approach is **designed around** explicit goals to maximize environmental benefit and minimize net cost to taxpayers.
- Insure that implementation of such a strategy will have the ability to take maximum advantage of development patterns proposed by the RGS.
- Dramatically expand the source control program. This exemplary program has already resulted in very significant reductions of heavy metals and other undesirable materials in sewage. An enhanced program could offer meaningful reductions in emerging pollutants not specifically dealt with by secondary treatment.
- Work with staff, other CRD committees and member municipalities to establish new, more progressive criteria for the management of stormwater in the Core Area (Stormwater is arguably the most significant source of pollution in receiving waters)
- Consider planning and construction of pilot plants in appropriate locations that would serve to move towards the IRM approach while allowing the opportunity to evaluate innovative approaches to treatment of sewage, and the rest of the waste stream, as a resource.
- Put in place, as an interim solution, underground holding tanks that could deal with problematic overflows currently occurring in the eastern part of the CRD sewage system.
- Encourage and support Core Area CRD municipalities’ efforts to deal with problems of Inflow and Infiltration.
- Investigate, as an interim solution, how additional suspended solids might be removed from effluent with the resulting increase in bio-solids being dealt with in an appropriate resource recovery facility. This might be accomplished, for example, by moving from 6 mm screens to 2 mm screens at outfalls.

That major capital works that would involve very considerable expenditures and would commit the Core Area irrevocably to a specific project direction be postponed until Phase 2 of the project.

Adopting this sort of approach to the project would provide a number of substantial benefits. Firstly, an enhanced source control program, implementation of storage tanks and removal of additional solids could provide almost immediate improvements for the effluent entering receiving waters. It is quite possible that these improvements, by themselves, might allow the effluent to meet emerging federal standards. Furthermore, commitment of resources to dramatically enhance the source control program would likely provide improvements in the area of emerging contaminants beyond those achievable by the project currently proposed.

Secondly, the time period from Phase 1 to Phase 2 would allow the committee to re-evaluate the current project and insure that maximum environmental benefit will be accrued at the lowest net cost to taxpayers. Maximizing achievement of these two goals could go a long way to insuring the region meets its environmental obligations, including response to climate change, while helping to insure that the project fits into a sustainable fiscal framework. Furthermore, the time from Phase 1 to Phase 2 would allow the committee to insure that the project is consistent with development patterns proposed by the RGS and allows for maximum possible flexibility to accommodate emerging changes in technology and system design.

I am not one who believes that the current practice of dumping into the ocean should be continued much longer. However, the sheer scope of this project and its impact on the future of the region demand that we get it right. It is not sufficient to suggest that we "have gone too far down the road" to consider significant change. Instead, it is absolutely imperative to insure that the residents of the region get the due diligence they should expect and wise use of scarce regional, provincial and federal tax dollars.

Submitted by Vic Derman

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