Soil & Water Conservation Society of Metro Halifax (SWCSMH)
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Master Homepage: http://lakes.chebucto.org

Ref.:	rp04-01	(2 pages)
To:	Mayor Peter Kelly MBA and Council	
From:	S. M. Mandaville B.E., Post-Grad Dip. Professional Lake Manage. Chairman and Scientific Director	
Date:	April 30, 2004	
Subject:	Regional Council Public Hearing on May 04, 2004- Interim Growth Management Strategy, Regional Planning - Proposed Amendments District 1, 2 & 3	

We will be delighted to throw more light on this mostly on a scientific level if any representative of HRM with some credible background in the freshwater sciences contacts us when we are free!

[I] Past history with septic systems:

We are distressed to note that certain key recommendations of HRM are being made on the premise of possible failure of septic systems over time and the tremendous costs to the public purse in providing central services based on past history all over HRM!

The aforementioned worries of HRM were also clearly evident in a formal submission made by HRM's staff (under the signature of John Sheppard PEng) to the Nova Scotia Dept. of the Environment & Labour (NSDEL) d/July 20, 2001 re the NSDEL's "A Sewage Management Discussion Paper for the Province of Nova Scotia" (see our web page, http://lakes.chebucto.org/HISTORY/NS/sewage_hrm.html for the HRM's submission).

[II] Modern septic systems:

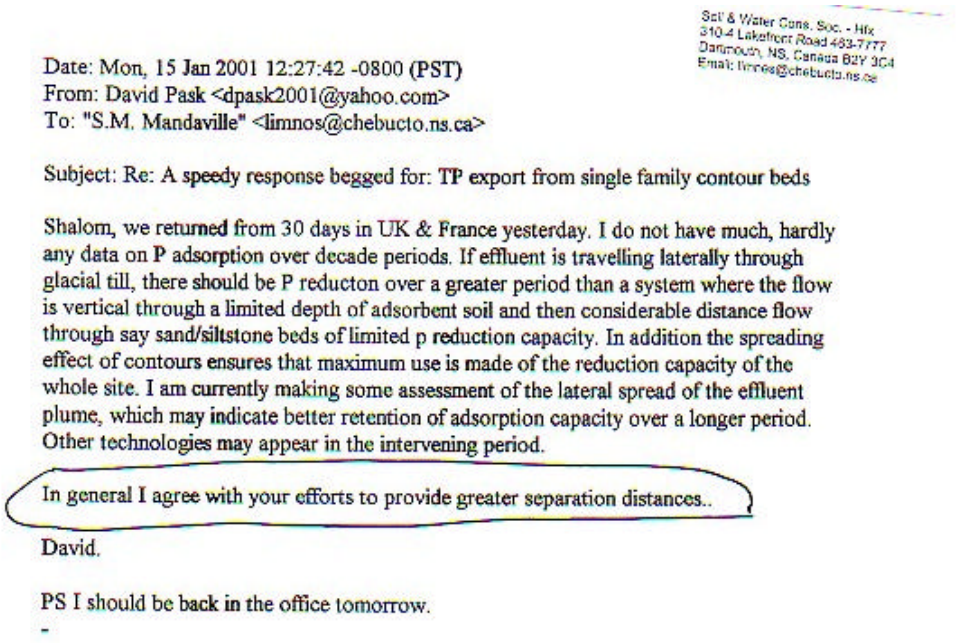
We respectfully submit to you that past history should not develop a `paranoia' about the future, especially in the case of onsite septic systems. The past (and many of the present) problematic systems may have been in areas served with what are known as "area beds"!

Since around late-1980s, the "CONTOUR SYSTEMS" have become a norm!

The contour systems basically involve `lateral spread of the effluent plume' and utilize the reduction capacity of the whole downstream site as opposed to the old `area beds' which utilized only the area immediately underneath the bed!

We are herewith pleased to insert an email d/January 15, 2001 that we received from Engineering Scientist, David Pask PEng., who is now with the world's leading Small Flows Clearing House of the massive United States Environmental Protection Agency (USEPA) at the University of West Virginia (the last we knew).

It was indeed David Pask who was the inventor/developer of contour systems which was his graduate project at TUNS in 1983. His primary supervisor was the now retired Prof. Dandapani Thirumurthy PhD PEng, and there were several other professors with varied expertise who also assisted David, a happy acquaintance of this writer!



Soil & Water Cons. Soc. - Hfx
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Date: Mon, 15 Jan 2001 12:27:42 -0800 (PST)
From: David Pask <dpask2001@yahoo.com>
To: "S.M. Mandaville" <limnos@chebucto.ns.ca>

Subject: Re: A speedy response begged for: TP export from single family contour beds

Shalom, we returned from 30 days in UK & France yesterday. I do not have much, hardly any data on P adsorption over decade periods. If effluent is travelling laterally through glacial till, there should be P reducton over a greater period than a system where the flow is vertical through a limited depth of adsorbent soil and then considerable distance flow through say sand/siltstone beds of limited p reduction capacity. In addition the spreading effect of contours ensures that maximum use is made of the reduction capacity of the whole site. I am currently making some assessment of the lateral spread of the effluent plume, which may indicate better retention of adsorption capacity over a longer period. Other technologies may appear in the intervening period.

In general I agree with your efforts to provide greater separation distances..

David.

PS I should be back in the office tomorrow.

[III] Possible long-term impacts on lake water quality (Total Phosphorus-TP, and other stressors):

Based on varied chemical as well as biological data, and predictive modelling of a whopping one thousand lakes/ponds that is in our possession, we once again emphasize (as we did in an email_submission to Council in March 2004) that the vast majority of STRESSED (i.e., variously polluted) LAKE ECOSYSTEMS are in the serviced areas (with central services) of HRM and NOT within unserviced areas, e.g., not within HRM districts one (1) to three (3), with a few exceptions.

If HRM feels the urge to protect inland lakes in the unserviced areas from a primary stress-indicator, i.e., Total Phosphorus (TP), then all it has to do is follow the "precautionary principle" of requiring greater setback distances from our sensitive oilgotrophic and mesotrophic lakes than what are required by the Nova Scotia Dept. of Environment & Labour (NSDEL)!

HRM should consider an approx. 100-metre setback from lakes wherever possible as recommended by a well researched initiative of the Halifax Watershed Advisory Board-HWAB (see our web page, http://lakes.chebucto.org/WAB/wab-gl.html).