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**REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION
MEETING OF THURSDAY 17 FEBRUARY 2011**

SUBJECT BIOSOLIDS MANAGEMENT PROGRAM – PROPOSED PILOT STUDY

ISSUE

To provide information regarding the proposed pilot study, as requested by the Saanich Peninsula Wastewater Commission (Commission).

BACKGROUND

At the meeting of 18 November 2010, the Commission passed a motion to undertake a pilot study of the effects of Class A lime stabilized biosolids on soil and its constituents when applied to land used for forage production and directed staff to bring back to the next meeting a work plan and estimated cost for the pilot study.

DISCUSSION

The Saanich Peninsula wastewater treatment plant (SPWWTP) generates approximately 3,500 tonnes of residual solids per year. This residual can be in the form of dewatered sludge which goes into the landfill as controlled waste or a processed Class A biosolids soil enhancer (PenGrow) for beneficial land applications.

Currently, the PenGrow product is stored, cured and distributed to the public at Hartland landfill. This distribution program has been well received by the general public since its startup in June 2006. It has steadily grown over the years from original 25 users to over 1,000 customers using the product last season.

Due to the lack of space available for storing and curing of the material at Hartland landfill, the production of PenGrow is limited to about 180 tonnes per year. This represents only 5% of the 3,500 tonnes of residual solids produced annually. Unless more storage and curing sites are made available, this distribution program has reached its production limit. In order to move forward and beneficially utilize all the biosolids produced at SPWWTP, the PenGrow program will need to be expanded to include larger bulk users. This will, in turn, require some changes to the current method of storage/curing and related facilities.

The Saanich Peninsula Liquid Waste Management Plan states that the CRD and its participating member municipalities commit to:

- (a) set as an objective the beneficial use of biosolids and application to peninsula farmland as the primary option for beneficial use.*

Prior to the startup of the SPWWTP in 2000, an initial land application pilot program was undertaken by applying sewage sludge from the old Bazan Bay sewage treatment plant to hayfields at Woodwynn Farm from June 1993 to August 1999. This turned out to be quite a successful program which did not create any public opposition.

In 2003, another initiative was considered by the Commission in the form of a land application plan proposed by Vantreight & Sons Farms to apply Class A biosolids to four parcels of agricultural land located in Central Saanich. This plan was eventually abandoned due to opposition raised by the nearby residents.

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The comments and concerns raised by the residents were found to be based mainly on a lack of understanding about the processed Class A biosolids soil enhancer product and where it was to be applied within the subject properties.

The lessons learned from these two initiatives will be incorporated into any future land application programs to farmland on the Peninsula.

The objective of the proposed pilot study is to develop a sustainable biosolids land application program for the PenGrow product. The program should be based on the triple-bottom-line principle which demonstrates the social, environmental and economic benefits to the Saanich Peninsula community and must be operated under the BC Organic Matter Recycling Regulation.

Appendix A provides the proposed guiding principles for the pilot study for land application of PenGrow to peninsula farmland and a work plan for the program.

FINANCIAL IMPACT

The proposed pilot study budget includes the cost of preparing the land application plan required by the Ministry of Environment, delivery and storage of biosolids at the participating properties, testing of soils, and testing for pharmaceuticals and personal health products. The program cost breakdown is:

1.	Preparation of Land Application Plan	\$15,000
2.	Storage/curing/handling costs at farms	\$15,000
3.	Testing (biosolids, soil & PPCP's)	<u>\$ 8,500</u>
	2011 Pilot Program Cost	\$38,500
	Minus: Processing costs minus tipping fees	<u>\$22,400</u>
	Estimated additional Pilot Program Cost	\$16,100

The additional cost of the 2011 Pilot Program is estimated to be \$16,100.

RECOMMENDATION

That the Saanich Peninsula Wastewater Commission approves that:

1. the pilot study proceeds as outlined in the attached work plan.
2. the 2011 Operating Budget be amended to include a surplus carried forward in the amount of \$16,100 to fund the additional pilot study costs.
3. staff report back with the completed Land Application Plan and negotiated customer agreements for final Commission approval prior to the implementation of the program.

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Attachment: 1 (Appendix A)

BIOSOLIDS MANAGEMENT PROGRAM – PROPOSED PILOT STUDY

Guiding Principles

1. The objective of this pilot study is to develop a sustainable biosolids land application program for the PenGrow product.
2. The program should be based on the triple-bottom-line principle which demonstrates the social, environmental and economic benefits to the Saanich Peninsula community.
3. The program must be operated under the BC Organic Matter Recycling Regulation.

Work Plan

Task Description	Status
1. Discuss with the Ministry of Environment (MOE) requesting permission to apply for one land application plan to cover multiple parcels of similar soil conditions and crops.	<ul style="list-style-type: none"> • Met with MOE on 07 December 2010. • 27 January 2011 follow-up with the MOE regional manager indicated that it is likely MOE will approve this land applicant plan approach.
2. Discuss with interested hay farmers to secure biosolids land applications sites. The concept is to deliver and store the material on the applicant's site.	<ul style="list-style-type: none"> • Met with various farmers on 24 January 2011; five farmers are interested with an approximate demand of 275 tonnes of biosolids.
3. Visit potential land application sites to determine if they are appropriate and if any issues need to be addressed in the land application plan.	<ul style="list-style-type: none"> • Will be conducted once this study is approved by the Commission.
4. The best time to apply biosolids on hayfields is in the fall. Since these applications require significant amounts of biosolids, and the SPWWTP can only produce 8-10 tonnes a day, a method for storing the material has to be determined.	<ul style="list-style-type: none"> • Investigate the use of forage bags at each site as a means of storing biosolids.
5. Prepare and submit land application plan to the MOE.	<ul style="list-style-type: none"> • Will be started once the study is approved by the Commission.
6. In order to educate, increase awareness and minimize concerns of nearby property owners, CRD staff will work together with biosolids applicants to notify neighbours of when, where and how the material is to be applied in their area.	<ul style="list-style-type: none"> • Will be conducted.
7. Soil samples will be collected from these land application sites prior to and after the application.	<ul style="list-style-type: none"> • Will be conducted.
8. For record keeping, biosolids will be tested once a year for the pharmaceuticals and personal health products content.	<ul style="list-style-type: none"> • Will be conducted.