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**REPORT TO SALT SPRING ISLAND LIQUID WASTE DISPOSAL LOCAL SERVICE COMMITTEE
MEETING OF FRIDAY, 23 MAY 2008**

**SUBJECT UPGRADE TO BURGOYNE SEPTAGE / SLUDGE RECEIVING AND PROCESSING
FACILITY - STRATEGY FOR PROJECT APPROVALS**

PURPOSE

To present to the Salt Spring Island Liquid Waste Disposal Local Service committee (SSILW) a proposal to seek public approval for the funding of a major upgrade to the Salt Spring Island liquid waste processing facility including a permanent compost facility.

BACKGROUND

The Capital Regional District (CRD) has been operating the septage processing facility at Burgoyne for some years now and has been experiencing a number of operational issues which are effectively increasing the operating costs for the facility through expenditure for additional manpower hours. Some of the issues are related to production capacity of the equipment and some issues are related to changes in the waste stream being received at the site. The committee is interested in implementing a composting strategy on the site, first as a pilot and then as a permanent facility to provide a beneficial reuse of the waste sludge on the island which will add further complexity to the job. Staff have projected that additional volumes of sludge will be received once the Channel Ridge wastewater plant comes on line and also expect additional volumes of septage as more lots are serviced on the island. If an onsite wastewater program is implemented in future, volumes of septage pump outs can also be expected. To provide a sustainable operation capable of meeting these new demands will require some significant upgrade works to the existing dewatering process. As composting is contemplated, the upgrade of the dewatering process and the design of the future compost facility need to be coordinated.

Operating Issues and Suggested Solutions

The primary operating issues now being experienced include the following:

1. Sludge production through the press varies with consistency of product. Consistency varies with the delivery schedule of the septage hauler, the source of the material and the makeup of the material as well as the inability to adequately mix the product. Mechanical mixing of the tanks will be the short term solution. Ultimately the tanks will need replacement with a configuration which allows for more rapid and complete mixing and avoids the vertical tank configuration which poses potential safety issues for access.
2. Grease from grease traps predominantly in Ganges Village is a major operating problem, especially in cold weather. The cold grease congeals on preliminary screens and does not mix in the tanks resulting in a press malfunction when the grease reaches the press. Grease needs to be handled outside of the process as a stand alone activity.
3. The front end receiving station or headworks is highly labour intensive. There are prefabricated septage receiving stations which would reduce the labour required for this operation. Plastics and rag removed from the operation will need a side stream process for disposal to the landfill. The CRD's waste treatment plants will need to participate in this process as they have similar materials for disposal.

4. Grit removal is less effective than needed. Grit which passes through the front end system lodges in the base of the tanks, resulting in numerous plugs in lines. An improved grit removal and grit washing operation needs to be part of the system headworks.
5. Although the Membrane Bioreactor operates effectively to treat the pressate from the operation, the operating tank volume is undersized resulting in periodic boil over of tanks and labour to clean up the product. Given the age of the membranes it may be advisable to look at a different technology for pressate treatment.
6. The press, the feed system, and polymer feed system are undersized for future volumes of product. There are times today when extended hours of pressing are necessary to ensure adequate storage volume is available for the haulers needs. Doubling the output of the press would allow today for a much more cost effective operation.
7. Odour from all components of the system will need to be dealt with. The suggestion is relocation of the dewatering equipment, MBR, and associated systems to the new building site identified in the recent submission to the trust, which will then also serve as housing for the future compost program.
8. Fugitive emissions (drainage, leachate, odours) need to be contained and mitigated. All new facilities need to be designed with this in mind.
9. General site security and storage of vehicles and equipment is very limited at present and should be provided for in the new design.

Future Compost Facility

It is envisioned that dewatering and composting operations would share a common building. The compost operation would likely move from a windrow operation proposed for the pilot to a bin type operation which is more compact. The housing of most of the component processes which generate odour in a single location allows for one strategy for ventilation and odour abatement. The front end receiving facility would remain at the current site, but would also be contained and designed for odour suppression.

Costs / Funding

Staff will need to complete a more comprehensive predesign and cost estimate for the upgrade works to the facility. The order of magnitude of the works will necessitate borrowing funds over a long term which in turn will require the committee to seek the approval of the electorate of Salt Spring Island to support the borrowing through the CRD. Staff suggests that with prudent expenditures for the facility upgrade, the annual debt servicing costs can probably be managed through the existing operating budget without need to increase the annual parcel tax for the facility. A cash flow analysis will be presented to the committee in concert with the conceptual design and costing for the facility. One short term borrowing will be retired this year, however a second short term borrowing will continue until 2011. To provide annual borrowing repayment funds, the outstanding short term borrowing will need to be retired in advance of 2009. The funds necessary to retire this borrowing would be added to the long term borrowing required for the project.

Approval Process

Approval for the project and the long term borrowing will need to be obtained from the electorate. In advance of posing the question to the public, considerable work is needed to detail the extent of the project, the intent of the upgrade and the short and long term costs and benefits to the community. The process will also need to convey to local residents how the project will address their immediate concerns already voiced. The process will also need to outline all aspects of the strategy for waste handling on the island, why composting is seen to be a benefit to the area and how the CRD intends to market the product in a safe and practical way.

There are a few methods of receiving the approval of the electorate. The most expedient and cost effective would be to conduct an alternate approval process. Under this option, bylaws are first passed by the CRD, the project is registered and advertised and Salt Spring Island electors are invited, through

the advertisement, to submit applications against the project if desired. If 10% of the electors register opposition to the project, the initiative is defeated. A second option is a referendum. The referendum, held by the CRD Board may proceed at any time, however if the referendum question is posed at the same time as the regional district elections (November 2008), costs to host the referendum are reduced.

Proposed Work Program

Staff will need direction from the committee on a number of issues, specifically:

- Is there a desire to carry out a long term borrowing to address a number of major operating deficiencies and to prepare the facility to meet future growth and a permanent compost facility?
- What method would the committee wish to use to obtain the approval of the electors?

Once these questions are answered, committee will need to confirm with staff the need to undertake the following works:

- Completion of a conceptual design and costing for the dewatering facility upgrades.
- Completion of a conceptual design to integrate the composting process with the proposed upgrade works.
- Development of a public information package about the project, addressing the concerns received to date and anticipated.
- Development of a public information package about the pilot and permanent composting project, addressing the concerns received to date and anticipated.
- Development of a time line for the project.
- Development of a cost summary for the project for amending the five year budget plan.

ALTERNATIVES

1. That the Salt Spring Island Liquid Waste Disposal Local Service committee receive this report for information and provide direction to staff on implementing the proposed work program.
2. That the Salt Spring Island Liquid Waste Disposal Local Service committee defer actions on this program at this time.

FINANCIAL IMPLICATIONS

There will be staff costs for the proposed work program to achieve approval for borrowing, however there are likely to be sufficient allowances for staff time to complete most of the work within the 2008 budget.

RECOMMENDATION

That the Salt Spring Island Liquid Waste Disposal Local Service committee receive this report for information and provide direction to staff on implementing the proposed work program:



Gary Hendren, ASCT,
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