



**Carey McIver & Associates Ltd.
ENVIRONMENTAL CONSULTANTS TECHNICAL MEMORANDUM**

TO: Solid Waste Advisory Group
Central Coast Regional District

FROM: Carey McIver
Principal, Carey McIver & Associates Ltd.

SUBJECT: Solid Waste Management Plan Update - Issues, Opportunities and Options

DATE: August 30, 2016

PROJECT: CCRD SWMP

As discussed at the last SWAG meeting on May 12, 2016, there are three main tasks involved with updating the Solid Waste Management Plan (SWMP):

1. Existing System Assessment;
2. Looking Forward – Options for the Future; and,
3. Creating a Plan

On July 30, 2016 we sent you an email with two documents to review prior to our next meeting scheduled for September 7, 2016. The first document was the draft minutes from the May 12th meeting and the second document was the draft Existing Solid Waste Management System report that outlines how waste is managed in the CCRD and identifies some outstanding issues.

This technical memorandum addresses the key issues identified in the Existing System Report and provides a long list of options to address each of these issues. The issues and options are presented in the following Table 1.

This technical memorandum also identifies key opportunities arising from the Existing System Report and provides a long list of options to address each of these opportunities. The opportunities and options are presented in Table 2.

To assist you in assessing the options, we have included a simple evaluation matrix in each of the tables. This comparative analysis is based on cost, complexity to implement and impact on waste disposal.

The cost comparison is based on a simple range of costs with amounts over \$10,000 represented by three dollar signs (\$\$\$), costs between \$1,000 and 10,000 represented by two dollar signs (\$\$) and costs under \$1,000 represented by one dollar sign (\$).

The complexity criteria are based on the level of complexity involved for any organization, the CRRD or a community group to implement and operate the option. There are three levels of complexity: easy, moderate and complex.

The impact on waste disposal criteria are based on the reduction of waste going to landfill and are described as significant, moderate and limited.

The objective of SWAG meeting #2 is to review and discuss the issues, opportunities and options presented in Tables 1 and 2 with a view to identifying which options are most likely to be successful and should be given priority for further review and inclusion in the updated SWMP.





Table 1: Issues and Options

| Issue | Options | Cost \$=low \$\$=moderate \$\$\$=high | Complexity to implement / operate | Impact on waste disposal |
|--|--|--|---|---|
| 1. Many residents are not participating fully in the available recycling services. This may be due to lack of financial incentives as well as effective promotion and education initiatives | <p>Establish Penalties on recyclable in garbage</p> <ul style="list-style-type: none">Charge for all garbage (incentive to reduce amount of waste)Charge only for garbage that contains recyclables (incentive to use recycling services)Ban items that can be diverted from disposal (no financial incentive to divert, but informs customers of CCRD preference) <p>Enforcement (linked with penalties)</p> <ul style="list-style-type: none">Random checkingRequire clear bags to be usedNo active enforcement (only asking customers what is in the bags/containers) <p>Rewards</p> <ul style="list-style-type: none">Hold promoted events where garbage bags are checked (on a voluntary basis) for divertables. If no divertables, a reward is given (e.g. shopping bag, coffee cup, “golden garbage can”, plus an acknowledgement sticker (for car, home, waste can, etc.) <p>Communications</p> <ul style="list-style-type: none">Information sheet/newsletter to all homes in Bella | \$\$ \$\$ \$ \$ \$ | moderate complex easy moderate moderate easy moderate | significant significant moderate significant moderate moderate |



| 2. Lack of diversion opportunities for businesses | <ul style="list-style-type: none"> Lobby the Province to include recyclable paper and packing generated by businesses in the Recycling Regulation (i.e. the MMBC stewardship program). Currently, only paper and packing from residential sources is included) Determine if a local business is currently backhauling recyclable cardboard and, if so, find out if they are willing to accept additional cardboard from local area businesses (possibly coordinated through the Chamber of Commerce) Encourage area residents to use cardboard boxes from retailers instead of shopping bags so that the boxes can be included in the MMBC recycling program Support small businesses in organizing monthly | \$ | easy | limited |
|---|---|----|----------|----------|
| | | \$ | moderate | moderate |
| | | \$ | easy | limited |
| | | \$ | moderate | moderate |



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| | <p>cardboard collection events where they share the burden of getting the cardboard to a recycling company in Williams Lake (when going on a supply run)</p> <ul style="list-style-type: none"> • Develop a small-scale composting facility for business-related food waste and cardboard at the landfill site <ul style="list-style-type: none"> ○ Conduct a needs assessment first (confirm that there is a substantive amount of organic waste to justify program and infrastructure costs) <ul style="list-style-type: none"> ▪ Waste composition analysis of business waste ▪ Stakeholder consultation ○ Consider conducting a small scale pilot to confirm design assumptions | \$\$\$ \$ \$\$ | complex moderate complex | moderate -- -- |
| 3. Landfill-related issues: | <p>Recommendations being prepared by landfill engineers from Morrison Hershfield</p> <ul style="list-style-type: none"> • <i>Landfill does not have a design, operation and closure plan</i> • <i>Filled areas have not undergone final cover (to minimize the infiltration of rain)</i> • <i>The slopes of some of the filled areas are too steep and need to be regraded for long-term slope stability</i> • <i>A groundwater monitoring program is needed.</i> • Develop a covered windrow compost facility for yard waste delivered to the landfill with product to be used | \$\$\$ | complex | moderate |



| | for final cover | | | |
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| 4. The current Financial Plan may have insufficient income to fund new programs or landfill related projects | <ul style="list-style-type: none"> • Broader application of tipping fees (e.g. apply tipping fees to all commercial waste) • Increase tipping fees • Increase tax requisition and Nuxalk contribution • Access grant money (potential) • Reduce service levels • Increase recycling revenue (increase participation) • Lobby for better cost recovery from EPR programs (e.g. MARR) | \$\$ \$ \$ \$ \$ \$ \$ | moderate easy-mod complex complex complex complex easy | n/a |
| 5. Refuse Disposal Bylaw Regulatory Bylaw No. 375 requires updating | <ul style="list-style-type: none"> • Review tipping fee structure - This options may be linked actions taken to increase residential participation in diversion (first issue listed) and the need to increase revenues to cover increased landfill costs (above issue) • Update bylaw to potentially include: <ul style="list-style-type: none"> ○ Require source separation ○ Updated tipping fee schedule ○ Enforcement requirements | \$ \$ | easy moderate | n/a |
| 6. Minimal monitoring of incoming loads of garbage (for recyclables and hazardous materials) at Thorsen Ck Waste Management Centre (TCWMC) | <ul style="list-style-type: none"> • Increase staffing /update contract provisions to require more screening of customer loads /more communications by staff; E.g. All incoming loads reviewed by scale attendant <ul style="list-style-type: none"> ○ This options may be linked with bylaw update and actions taken to increase residential participation in diversion • Implement best practices for drop off facilities: safety, staffing, signage • Train staff in best practices (e.g. SWANA “Training | \$\$\$ \$ \$ | complex moderate easy | n/a |



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| | Sanitary Landfill Personnel" course) | | | |
| 7. Can service levels be increased? (issue raised by Wally) | <ul style="list-style-type: none">• Review current service levels to determine if increase is needed• Increase days of operation seasonally (active bear season) | \$ \$\$ - \$\$\$ | easy moderate | n/a |

**Table 2: Opportunities and Options**

| Opportunities | Options | Cost | Complexity to implement / operate | Impact on waste disposal |
|--|---|------|-----------------------------------|--------------------------|
| 1. To encourage waste reduction | <ul style="list-style-type: none">Conduct targeted campaigns that make people rethink their consumption habits<ul style="list-style-type: none">Borrow campaign materials from jurisdictions like Metro Vancouver, e.g. “Make Memories, Not Garbage” Christmas Campaign | \$ | easy | limited |
| 2. To reduce food waste in the landfill | <ul style="list-style-type: none">Publish tips that help people reduce food wastage, e.g.<ul style="list-style-type: none">Proper food storage“Right-sizing” food purchases for your familyRecipes for what to do with leftovers or other holiday food-related waste such Hallowe'en pumpkinsUse campaign materials available for free from Metro Vancouver, US EPASupport a strong link between local restaurant/grocers and the food bank (donations)Encourage backyard composting (see below) | \$ | easy | limited |
| 3. To encourage backyard composting | <ul style="list-style-type: none">Promote bear smart backyard composting through a variety of communication channels (news column, CCRD website, annual waste management newsletter to residents) | \$ | easy | limited |



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| | <ul style="list-style-type: none"> Host “how to” workshops on backyard composting , or workshops on how to build your own composter | \$ | moderate | limited |
| 4. Enhance/improve Free Store | <ul style="list-style-type: none"> Expand to include broader range of materials (based on available space), e.g. building materials Assign a staff person to maintain the Free Store Consider working with a local organization to provide volunteer staff <ul style="list-style-type: none"> Consider allowing the Free Store to be run as a thrift store by a local non-profit organization Install user-friendly storage and signage Establish and promote a code of conduct that addresses site usage problems (loitering, site cleanliness and deposit of non-reusable goods). | \$ \$ \$ | easy easy moderate | limited for all options |
| 5. To encourage more reuse | <ul style="list-style-type: none"> Establish a “lending library” of reusable items for events (plates, cups, cutlery, bowls, etc.) from items dropped at the Free Store; e.g. Pender Island Recycling Depot Have space available for on-site repair and reuse, e.g. Pender Island Bike Shop Promote reuse through holding/supporting reuse events, e.g. <ul style="list-style-type: none"> Repair cafés (from Repair Café Saanich: <i>Repair Cafés are free meeting places and they're all about repairing things collectively. In the place where a Repair Café is located, you'll find tools and materials to help you make any repairs</i> | \$ \$ \$ | easy moderate easy to moderate | limited for all options |



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| | <p><i>you need. On clothes, furniture, electrical appliances, bicycles, crockery, appliances, toys, etc. You'll also find expert volunteers, with repair skills in all kinds of fields. Visitors bring their broken items from home. In the Repair Café, they start making their repairs, together with the specialists. It's an ongoing learning process. If you have nothing to repair, you can enjoy a cup of tea or coffee. Or you can lend a hand with someone else's repair job.)</i></p> <ul style="list-style-type: none"> ○ Make Art from Trash / Upcycling workshops ● Implement or pilot community-wide swaps, e.g. Nanaimo's Reuse Rendezvous, Prince George's Junk in the Trunk, Squamish's Swap Meet ● Undertake campaigns targeting reuse behaviours, like using cloth shopping bags (campaign materials available through other jurisdictions) | | | |
| 6. To support Extended Producer Responsibility (EPR) | <ul style="list-style-type: none"> ● Expand EPR services at TCWMC to move towards a one-stop shop <ul style="list-style-type: none"> ○ Ensure EPR service contracts cover the cost of any necessary storage infrastructure, transportation and disposal ● Lobby the province to ensure that all EPR programs meet their statutory obligations ● Promote EPR diversion opportunities in the Bella Coola Valley and in Williams Lake (if not available locally) | \$ | moderate | limited for all options |



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| 7. To mitigate wildlife-human conflict associated with waste management | <ul style="list-style-type: none">• Promote bear smart waste storage• Ensure CCRD waste management facilities are designed and operated to minimize bear attractants• Have bear smart waste storage at all CCRD facilities (e.g. parks) | \$ \$\$ | easy moderate | moderate n/a |
|--|---|------------|------------------|-----------------|