



## **COWICHAN VALLEY REGIONAL DISTRICT**

### **SOLID WASTE MANAGEMENT PLAN**

**NOVEMBER 15, 1995**



**Amendment No. 1 – June 25, 1997**

**Amendment No. 2 – August 28, 2002**

(approved by Ministry of Water, Land and Air Protection on December 24, 2002)





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# **COWICHAN VALLEY REGIONAL DISTRICT SOLID WASTE MANAGEMENT PLAN**

## **SECTION 1 - STATEMENT OF REGIONAL OBJECTIVE AND GUIDING PRINCIPLES**

The objectives of the Cowichan Valley Regional District's (CVRD) Solid Waste Management Plan are the refinement of the Regional solid waste management system; the further reduction in the amount of municipal solid waste requiring disposal, beyond the provincially mandated goal of 50% less waste disposed of per person in 2000 as compared to 1990 levels; and the long term goal of working towards zero waste. This will be done according to the following guiding principles:

1. The consumption of material and energy resources is set at a level that is ecologically sustainable.
2. The Regional solid waste stream is reduced to the greatest extent possible, in accordance with the hierarchy of reduce, reuse, and recycle; consistent with local resources and the nature of the Regional solid waste stream.
3. The goal of environmental policy is to not exceed the capacity of the environment to assimilate waste and to ensure protection of public health. The strategies for achieving this goal are in accordance with the precautionary principle.
4. Individuals and firms are enabled to make environmentally sound choices about consumption of resources and generation of waste through provision of appropriate information, including user-pay and market-based incentives wherever possible.
5. Reduction policies and strategies are developed through an open and effective public consultation process in a cooperative manner between government, private enterprise and community stakeholders. This may entail more flexibility of existing procedures and the establishment of new procedures. The cost effectiveness of any strategy will be based on a full accounting of costs and benefits - both monetary and non-monetary.

6. The strategies and policies promote community development whenever possible, and are sensitive to the social needs of the Region.
  
7. The overall program is flexible and can be modified to meet changing conditions such as future demands and new environmental criteria.



# **COWICHAN VALLEY REGIONAL DISTRICT SOLID WASTE MANAGEMENT PLAN**

## **SECTION 2 - HISTORY OF PLAN DEVELOPMENT**

This Plan was originally developed in three stages, and, to date has been amended twice. The plan development was consistent with the process identified by the Ministry of Environment, Lands and Parks (now the Ministry of Water, Land & Air Protection).

### **2.1 Stage 1 and Stage 2**

Stage 1 involved the following:

- Authorization of the planning process by the CVRD Board and the initiation of planning activities through:
  - establishment of the Regional Solid Waste Management Committee, a sub-committee of the Board dealing with solid waste issues.
  - formation of a Local Solid Waste Advisory Committee providing input from interested citizens and representatives from recycling, environmental and other nongovernmental organizations.
  - selection of a consultant, Dayton & Knight Ltd. and associated sub-consultants, to provide technical and administrative support efforts.
- Development of quantitative base information pertaining to the CVRD and existing waste management functions and the projection of population and waste generation values for the planning period.
- Evaluation of a wide range of waste management options including cost estimation of several major alternatives, including both landfill and incineration disposal.

- Conduct public consultation, including open houses and forums allowing public questions and comments.
- Documentation of the Stage 1 process in a published report providing the developed information and recommendations.
- Preparation of terms of reference for Stage 2 work.

The Stage 1 report was accepted by the CVRD Board on October 10, 1990 and received Ministry approval on December 3, 1990.

Stage 2 works continued the planning process in accordance with recommendations and decisions from Stage 1 and in compliance with substantive guideline changes mandated by the Ministry of Environment. In the interim period before initiation of Stage 2 work, District staff and local organizations initiated a number of waste reduction and recycling programs.

Stage 2 work involved the following:

- Existing data and projections were updated to reflect current conditions and separate siting studies for location of a new regional landfill disposal facility were undertaken concurrently with Stage 2 planning.
- Waste reduction measures potentially applicable to achievement of the Ministry of Environment mandated goal of a 50 percent decrease in disposed wastes were developed and evaluated.
- Evaluations were also developed for disposal of the residues remaining after application of waste reduction measures using information characterizing four candidate sites from the parallel landfill siting studies.
- Waste management system recommendations were provided for meeting the intermediate waste reduction goal of 35 percent by the year 2001 and the ultimate goal of 50 percent beginning thereafter.

- Public consultation was provided through the periodic publication of significant information, including location of short-listed sites for a regional solid waste management complex (and associated landfill), and a series of town hall meetings and public consultations to obtain comment. Summaries of the siting studies and the Draft Stage 2 Plan were widely circulated to inform residents about the issues.
- Preparation of final Stage 2 planning documents and a separate landfill siting study report completed Stage 2 work.

The Stage 2 report and landfill siting studies were accepted by the CVRD Board on August 24, 1994. The Board selected Site B for the location of the solid waste management complex and associated landfills for disposal of process residues. The Stage 2 report was approved by the Ministry of Environment on September 29, 1994.

## **2.2 Incineration Disposal**

Incineration disposal was initially considered in the Stage 1 planning process and was rejected by the Board in favour of centralized landfill disposal.

In response to continued interest in incineration for residue disposal, the Board action of August 24, 1994 included the following language, "that as a result of the requests made by members of the Cowichan Valley Regional District Board and by members of the public for more detailed information regarding the relative costs and viability of advanced technology incineration, including co-generation, that upon acceptance of the Solid Waste Management Plan Stage 2 by the Ministry of Environment, Lands and Parks, and in parallel to the acquisition of the selected landfill site, a detailed evaluation of a suitable municipal incinerator, incorporating co-generation of electricity be carried out including a comprehensive financial review of the capital and operating costs of such a facility".

Updated costs for centralized facilities both with and without energy production were prepared for Board consideration by Dayton & Knight and submitted in December 1994.

The Board reconsidered and again rejected the incineration disposal option on March 7, 1995.

### **2.3 Site D-1 (Proposed Hill 60 Sanitary Landfill and Solid Waste Management Complex)**

Opposition, primarily by local area residents, to the selected Site B for the solid waste management complex led the Board to re-evaluate site alternatives and to select a new Site D-1 in May, 1995. The amended Stage 2 Plan incorporating Site D-1 was approved by the Ministry of Environment on June 1, 1995, subject to the completion of favourable hydrogeological investigations and public consultation and review to be undertaken as part of the Stage 3 process.

The Site D-1 hydrogeological investigations were initiated in July 1995. Site D-1 was found to meet or exceed the Ministry of Environment's criteria for landfill disposal and also the additional criteria established in the Stage 2 Solid Waste Management Plan for assessing the suitability of the site for the new Solid Waste Management Complex. It was concluded that Site D-1 was suited for the intended use as the location for the Solid Waste Management Complex. The Phase 1 assessment was submitted as a draft for Committee review on October 11, 1995.

The Committee endorsed the findings of the Phase 1 assessment. Phase 2 was to involve site-specific studies to provide data for detail design of the site facilities and to establish the requirements for monitoring.

### **2.4 Stage 3**

Stage 3 work included the following:

- Preparation of the Solid Waste Management Plan in Draft form, consultation with technical and public advisory bodies that sit jointly on the Solid Waste Advisory Committee, and presentation to the Engineering Services Committee for acceptance or modification.
- Concurrent hydrogeological investigation and Phase 1 Assessment of Site D-1.
- Present Draft Plan including Phase 1 Assessment of Site D-1 to general public at an Open House.

- Finalize Plan for approval by CVRD Board.
- Forward Plan for approval of the Minister of Environment, Lands and Parks.

## **2.5 Amendment No. 1**

Concern over the high cost and technical difficulties of developing the Solid Waste Management Complex at the D-1 Site led to consideration of separating the recyclables receiving and processing components of the Solid Waste Management Complex in a separate location closer to Duncan and at a lower elevation. These facilities could be added to the recycling drop-off depot which was to be located north of Duncan to serve Duncan and the District of North Cowichan.

An investigation of the concept of separating the Solid Waste Management Complex from the proposed Hill 60 landfill site was carried out by Dayton & Knight Ltd., which resulted in a report prepared April 1, 1996. It was found that overall, costs would be marginally decreased, and public accessibility enhanced by such an approach. In addition, the concept of re-establishing growth of harvestable trees on the landfill site was investigated by Polster Environmental Services in a report prepared in December 1996. It was determined that full return to active forest land is achievable providing a thick soil mix is placed on top of the closed landfill, and pioneering species of vegetation established prior to reforestation.

Potential sites for the Solid Waste Management Complex and drop-off depot were investigated revealing that the only available suitably zoned centrally located properties of sufficient size were within the Highway 18 industrial area.

The following points formed the basis for the amendment and were approved by the CVRD Board of Directors on August 28, 1996.

1. That the Cowichan Valley Regional District Board complete the purchase of the entire 52.6 acre property described as that part of Section 3, Range 2, Somenos District, Title D2159, based on the purchase price of \$950,000.
2. That the Stage 3 Solid Waste Advisory Committee be reconvened to guide the public consultation process for the amendment of the Solid Waste Management Plan.

3. That the Terms of Reference for the Landfill Acquisition Committee be expanded to include:
  - .1 consideration of alternative service delivery arrangements for these facilities.
  - .2 the design, construction and operation of the Materials Recovery Facility Complex.
  - .3 the design, construction and operation of the Hill 60 Landfill Site.

After discussion with the Solid Waste Management Plan - Plan Monitoring Advisory Committee and the public at an Open House, the amended Solid Waste Management Plan was approved by the CVRD Board on June 25, 1997.

## **2.6 Amendment No. 2**

The proposed Hill 60 Landfill received approval under the Solid Waste Management Plan in December 1995, but a long-term lease was not obtained until October 1997. A License to Cut timber for developing the first phase of the site was then required from the Ministry of Forests, and was seen as the last outstanding approval required. Although an application for the first phase was made in December 1997, approval was not granted until May 1998. The Ministry of Forests, however, noted in its approval that any further timber cutting permits may not be issued due to possible infringement of Cowichan Tribes' claims involving traditional use of certain areas of Hill 60.

To accommodate the disposal of residual waste after the closing of the Koksilah Road landfill, the CVRD entered into a contract with Wastech Services Ltd. to export up to 7500 tonnes of CVRD solid waste to Cache Creek on an interim basis. Temporary approval for waste export was granted by the Honourable Cathy McGregor, Minister of the Environment, Lands and Parks, on May 21, 1998.

The Ministry of Forests also requested that a Logging Plan for the first phase of the landfill be submitted for approval. The CVRD recognized that if the landfill were limited to the first phase only, it would be less economical to develop. In June 1998, the CVRD submitted a further timber cutting application for the Hill 60 area, which was designed to avoid impact on critical areas in question, and provide for at least a 30-year landfill. To date the Ministry of Forests have not responded to this request, nor issued approval of the Logging Plan for the first phase.

This was followed by the Cowichan Tribes' filing a court injunction to block development of the site due to concerns over potential impacts on traditional land uses in the area.

Given the potential for a lengthy legal challenge and overall lack of certainty surrounding final site acquisition and development of the proposed Hill 60 Landfill, the CVRD Board Chairperson announced on October 14 of 1998 that the CVRD was abandoning its efforts to develop the Hill 60 landfill site, and would proceed with the siting of a new regional landfill according to the following schedule.

- Complete desktop study of potential sites by December 31, 1998
- Complete public consultation process by March 31, 1999
- Complete geological site analysis by June 30, 1999
- Select final site and submit application to the Ministry of Environment for an amendment to the Region's Solid Waste Management Plan by July 31, 1999
- Commence with the detailed design and construction upon Ministry of Environment approval for opening the landfill October 1, 2000

After review of the completed desktop site study, on January 13, 1999, the CVRD Board of Directors further resolved:

- That the CVRD will not proceed with the search for a new landfill site at this time.
- That staff be authorized to actively pursue other options on Vancouver Island for solid waste disposal.

This resolution was just before the receipt of a letter from the Ministry of Environment, approving an extension of the export time frame through the end of 2001, while the CVRD continued its search for a new landfill.

Shortly thereafter, on January 27, 1999, the CVRD Board made the following resolution:

- That the Cowichan Valley Regional District continue exporting its regional solid waste for the short-term, and pursue options for the medium term for approximately five years for out-of-area disposal while a review of long-term disposal options is investigated.

Realizing that export would have to continue beyond 2001 in order for a local disposal facility to be constructed, the CVRD Board resolved on September 22, 1999, to extend the contract with the Greater Vancouver Sewage and Drainage District from the beginning of 2000, through to the end

of 2004. The CVRD also requested approval from the Village of Cache Creek and Thompson-Nicola Regional District, and applied to the Ministry for an extension to the export approval through the same period of time.

Although approval was received from the Greater Vancouver Sewage and Drainage District, Village of Cache Creek, and the Thompson-Nicola Regional District, the letter from the Minister of Environment, dated January 18, 2000, concluded:

- “In the absence of information that you are actively pursuing these procedures to amend the plan, it would not be appropriate at this time to approve your request to extend the waste export time period”.

Faced with the need to continue waste export, at least for the short-term, the CVRD began the process of a plan amendment as required by the Ministry. At a CVRD Committee of the Whole meeting on January 18, 2001, Dr. Jon O’Riordan, Assistant Deputy Minister, Environment and Lands Regions Division and Mr. Dave Brown, Manager of Pollution Prevention, Vancouver Island, Ministry of Environment, Lands and Parks provided guidance as to the scope of the amendment itself, and the public consultation activities required. In short, in order to incorporate the existing practice of waste export into the plan, and seek public acceptance of continuing this practice over the short-term while long-term disposal options are pursued, a relatively simplified plan amendment process was decided upon.

Due to the substantial changes in the waste management practice in the Cowichan Valley resulting from the cancellation of the Hill 60 Landfill, the extended export period necessitated by the time to find and develop a new disposal site, and the Ministry direction provided, the CVRD Board of Directors made the resolution on February 8, 2001 that the following modifications be made to the solid waste management plan:

1. Replace the section describing the Hill 60 Landfill with a section describing continuous waste export for a period of five years.
2. Delete the capital costs related to the development of the Hill 60 Landfill.
3. Delete references to the Hill 60 Landfill in other sections of the plan document and replace with references to export of residual.
4. Add reference to continued investigation of residual disposal alternatives during the next



five-year period.

This amendment was initiated in April 2001 with the CVRD Roundtable on the Environment agreeing to act as the Public Advisory Committee for the SWMP amendment process. The primary role of the Committee was to ensure that the following requirement of the Waste management act be met. The Act requires that where the Minister *"is satisfied that there has been adequate public review and consultation with the public with respect to the development, amendment and final content of the waste management plan"*, that the plan may be approved.

At its April 12, 2001 meeting, the following Terms of Reference were adopted by the Roundtable on the Environment for its role as the Public Advisory Committee for the CVRD's Solid Waste Management Plan Amendment No. 2:

1. To provide comment and advice to the CVRD Engineering Services Committee on the design and implementation of the public consultation process component of the CVRD's Solid Waste Management Plan amendment;
2. To receive, consider and report on submissions from the public regarding the amendment;
3. To review and consolidate public response to the DRAFT amendment; and
4. To work with and provide advice to Cowichan Valley Regional District staff assigned to the amendment process.

The committee therefore oversaw the development and implementation of public consultation plans, documents and activities. This included: a detailed newsletter delivered to 32,000 homes and businesses in the community; four open houses held across the district (also attended by Committee members); a detailed questionnaire and interactive website; and several newspaper advertisements.

The result of this process was public endorsement for continued waste export over the short-term (five years through 2006) and continued investigation of residual disposal alternatives by the CVRD over that period. The public also provided comment on long-term disposal alternatives and the issues involved, which will help guide the CVRD's approach to researching such options. Detailed results are contained in the *Public*

*Consultation Report, Solid Waste Management Plan, Amendment #2* that was drafted in August 2001. The report has subsequently been reviewed and endorsed by the CVRD Roundtable on the Environment and is available upon request.

The actual amendment of the plan, to incorporate the changes identified above, proved to be a more involved exercise than originally conceived. Basically, a significant amount of updating was required to reflect the completion of a number of tasks that were set out in the Plan when it was originally drafted in 1995, and to summarize other, mainly historical, components of the plan in a concise form. These 'housekeeping' amendments did not alter the intent of the Plan, and therefore, were not raised as issues requiring public consultation and are not reflected in the Public Consultation Report previously mentioned. The Public Advisory Committee was made fully aware of all amendments to the Plan during their review of the document.

The CVRD requested a one-year extension to the Minister's waste export approval to December 31, 2002, while the amended plan was being completed. The Minister granted this request in a letter dated November 15, 2001.

During this period, the amended Solid Waste Management Plan was subsequently approved by the CVRD Board and delivered to the Minister of Water, Land and Air Protection for final approval.

# COWICHAN VALLEY REGIONAL DISTRICT SOLID WASTE MANAGEMENT PLAN

## SECTION 3 - BACKGROUND

### **3.1 Plan Area**

The Solid Waste Management Plan serves the entire Cowichan Valley Regional District, which is comprised of the following member Municipalities, and Electoral Areas:

- City of Duncan
- District of North Cowichan
- Town of Ladysmith
- Town of Lake Cowichan
- Electoral Area A- Mill Bay/Malahat
- Electoral Area B - Shawnigan Lake
- Electoral Area C - Cobble Hill
- Electoral Area D - Cowichan Bay
- Electoral Area E - Cowichan Station/Sahtlam/Glenora
- Electoral Area F - Cowichan Lake South/Skutz Falls
- Electoral Area G - Saltair/Gulf Islands
- Electoral Area H - North Oyster/Diamond
- Electoral Area I - Youbou/Meade Creek
- Cowichan Tribes

A map of the plan area and existing waste management facility locations is provided on Figure 1.

### **3.2 Existing Waste Management System**

#### Waste Collection and Disposal

Most of the Plan area residents have access to and are charged for regular collection services, but the use of these services, although mandatory, is not enforced and some elect not to participate. Residential curbside waste collection is provided to single-family units as a municipal function in the City of Duncan, the District of North Cowichan, Town of Lake Cowichan and the Cowichan

Tribes lands. The Town of Ladysmith contracts for waste collection for residential customers. Electoral Areas D, E, F, G, and I receive single-family residential curbside waste collection through CVRD contractors. Residential service is similar across all member municipalities and participating electoral areas and is based on a user-pay system. This incremental or variable rate user-pay system was established with a common limit of one can of waste per week. Bi-weekly collection allows for two cans every second week. If residents wish to have additional waste collected, separate garbage tickets must be purchased at a cost of \$2.00 per container.

Many residents in Electoral Areas A, B, C and H choose to receive waste collection service through private contracts. The City of Duncan and Town of Lake Cowichan also provide waste collection services to commercial customers. Commercial customers, in all other parts of the Plan area, are serviced by private firms through individual subscription.

Disposal services, for commercial, institutional or residential customers who do not wish to make use of municipal or private collection, are provided at three drop-off depots within the Plan area. These drop-off depots include the converted incinerator sites at Peerless Road and Meade Creek, near Ladysmith and Lake Cowichan respectively, as well as the new complex at 3900 Drinkwater Road, Duncan. Currently, all waste collected within the Plan area is received at, or transferred to, the Bings Creek Solid Waste Management Complex transfer station. It is then compacted by a tracked loader and deposited via a grade separated tipping floor into 'B' train transport trailers for shipment to the Greater Vancouver Regional District's landfill in Cache Creek within the Thompson Nicola Regional District.

The Bings Creek Solid Waste Management Complex opened in March 1998 and has been expanded several times since its inception. The facility currently consists of the following components:

- Entrance facilities, including a scale house that can accommodate various methods of payment, weigh scales and a site management office.
- A drop-off service centre that accepts residential, commercial and institutional waste and recyclable materials (see Appendix A for a detailed list of accepted recyclable materials). This area has now been expanded twice to include eight grade-separated service bays for recyclables and waste, and a warming hut to allow Recycling Attendants to be in closer

proximity to users entering the drop-off area.

- A second recycling area with services including a Multi-Product Neighbourhood Recycling Bin, several bins for cardboard and wheeled tote containers accepting mixed recyclables. All recyclable materials in this area are accepted at no charge.
- A transfer station for large loads of waste from member municipal and/or commercial haulers, or from other CVRD waste drop-off depots.
- A maintenance shed for support utilities, as well as containment areas for recyclable items, including propane tanks, CFC appliances, antifreeze, used oil filters, rechargeable and disposal household batteries, fluorescent tubes, scrap tires, and vehicle batteries.

The conversion of the Peerless Road and Meade Creek incineration facilities to material drop-off depots was completed in 1998.

These facilities accept residential, commercial and institutional wastes, and most of the recyclable materials accepted by the Bings Creek Solid Waste Management Complex (see Appendix A), but do not accept waste from commercial haulers' self-tipping trucks.

#### Waste Reduction and Reuse

The current CVRD waste management system includes several waste reduction and recycling initiatives that are summarized as follows:

- Implementation and enforcement of bans restricting the disposal of 58 items as of January 1, 2001. (See Appendix A for a comprehensive list of materials.)
- Development of the Cowichan Materials Exchange, which was launched in late 1998 as a partnership between the CVRD and the local News Leader newspaper in an effort to divert materials that could be reused. The program allows residents or businesses to place classified ads for no charge for any materials/wastes they are wishing to dispose of or acquire for free.
- Development of a solid waste management component to the CVRD website at <http://www.cvrld.bc.ca>. The site was posted in 1998 and contains almost 200 tips and practices that people and businesses can adopt to reduce and reuse materials/waste. The site has since been expanded to include the entire contents of the current 68-page CVRD Recycling Directory.
- Education and Promotion - staff have expended considerable effort in the development and

maintenance of an on-going program, including the development and distribution of 30,000 CVRD Recycling Directories.

- Cooperation with provincial and federal promotional programs and distribution of related information.
- Maintaining a central information telephone number to provide public access to information about solid waste management and waste reduction programs.
- Implementation of a backyard-composting program including the distribution of 7,000 subsidized backyard-composting units in previous years, most of which are currently in active use.

### Recycling

The current CVRD curbside recycling program features collection of recyclables in Electoral Areas A, B, and H, and collection of both waste and recyclables in Electoral Areas D, E, F, G, and I. No CVRD curbside collection program exists in Electoral Area C, but a private contractor offers curbside waste and recycling collection. Route collection of commingled recyclables involves a colour-coded two-bag system serving both single family and certain multi-family complexes. Eligible residences in CVRD electoral areas are defined as follows:

*“single family detached dwelling; each dwelling unit of a duplex, triplex, quadruplex, townhouse or row house development, a manufactured home, but does not include an apartment building containing more than four dwelling units, a hotel, motel, resort or marina, or any commercial property, seasonal campsite or a manufactured home situated in a manufactured home park that has commercial garbage collection containers.”*

Jurisdictions within the CVRD also have their own curbside recycling programs similar to that of the CVRD's. These jurisdictions include the City of Duncan, the District of North Cowichan, the Town of Ladysmith, and the Town of Lake Cowichan. Cowichan Tribes are also researching recycling options and the Chemainus First Nations have implemented a curbside recycling pick-up program.

The curbside recycling program is consistent for all municipal and electoral areas in terms of materials accepted: tin cans and aluminum foil; mixed waste paper; magazines; cardboard; newspapers and inserts; boxboard and telephone directories; all clean rigid and soft plastics (e.g. containers or wrap) coded #1 through #7, except styrofoam. Recyclables are picked-up every second week on a same day schedule (Electoral Areas F and I and the Town of Ladysmith receive weekly curbside waste collection in the summer months).

Other recycling programs in place in the Cowichan Valley include the following:

- Free recycling directories are available from the CVRD and outlets throughout the Plan area. The directory contains information on how to recycle over one hundred common waste items. The directories are updated as markets for recyclable items change.
- Three CVRD staffed recycling drop-off depots are located within the Regional District at Bings Creek, Peerless Road and at Meade Creek. These sites accept the following materials: scrap metal, yard and garden material, antifreeze, oil filters, rechargeable and disposal household batteries, fluorescent tubes, mixed waste paper, glossy paper, cardboard, newspapers and inserts, propane tanks, lead-acid batteries, all clean rigid and soft plastics (e.g. containers or wrap) coded #1 through #7, and scrap tires. The Bings Creek site also accepts large loads of clean plastics items too large to be accepted in the curbside program (except styrofoam and PVC items coded #3), as well as asphalt roofing materials and drywall/gypsum.
- Multi-Product Neighbourhood Recycling Bins (MPNRB) currently operate at 12 sites throughout the Regional District. These bins accept newspapers and inserts, glass, metal cans and glossy magazines. They are not staffed, but are supervised by local merchants that act as environmental partners.
- Collection of all types of telephone directories in co-operation with local schools and the CVRD's corporate partners, Telus and the Phone Directory Company.

The District of North Cowichan, City of Duncan, and Town of Lake Cowichan also provide neighbourhood drop-off bins for un-waxed cardboard.

Three private waste management facilities, that accept a wide range of recyclable materials from residential, industrial, commercial and institutional generators, are currently operating in the Regional District. Harper's Recycling, Vancouver Island Recycling Centre and Active Disposal and Recycling all currently accept many of the same recyclable items as at CVRD staffed recycling drop-off depots.

Local bottle depots are also collecting a wider range of recyclables than previously. This includes many of those items collected by curbside recycling programs, as well as those covered by provincially regulated industry stewardship programs. The Cowichan Valley Bottle Depot in Duncan is the regional facility for Household Hazardous Wastes (HHW) such as liquid inflammables, pesticides and leftover fuels. It also accepts all types of leftover paint products, as does the Junction Bottle Depot in Ladysmith.

Pharmaceuticals, used lubricating oil and all ready-to-drink beverage containers, except those containing milk-type products, are accepted back by retailers at no charge (deposits are returned for beverage containers).

#### Processing & Composting

Central Landscape Supplies, a privately owned firm in the south end of the Regional District, processes yard, garden, and land clearing debris into mulch for soil blending.

Westcoast Landfill Diversion Corporation is an in-vessel composting operation in the final stages of development, and is also located at a site in the South end of the district. The privately owned facility is designed to accept material ranging from commercial organics/food waste to waxed cardboard, as well as clean wood waste and yard and garden material for processing into a marketable compost. The operation is currently working with the Ministry of Water, Land and Air Protection on a series of compliance requirements.

The Town of Ladysmith operates a facility capable of processing yard and garden waste. All other jurisdictions in the CVRD direct yard and garden material the CVRD drop-off depots. The CVRD currently maintains a contract with a private sector firm to process all yard and garden material accepted at CVRD facilities.



### Materials Transfer

After collection, all waste is hauled to the transfer station at the Bings Creek Solid Waste Management Complex on Drinkwater Road. Waste is then transferred to 'B' train transport trucks for hauling to the landfill at Cache Creek.

The vast majority of recyclable materials collected within the Regional District, by the CVRD, member municipalities and private firms, are currently hauled to a private sector Materials Recovery Facility. It is operated by Vancouver Island Recycling Centre, which leases the CVRD's old Koksilah Road incinerator site. There, recyclable materials are sorted and bulked for transfer to Vancouver Island Recycling Centre's Nanaimo operation for baling. The materials are then loaded for shipment and sale to various private sector processing facilities in British Columbia, the northwestern United States, or offshore markets to be recycled into consumer products. Limited amounts of recyclables from the Duncan Materials Recovery Facility are sent directly to end-processors for recycling.

Local scrap metal dealers also bulk or bale materials for transfer to end-markets. Other recyclable materials, such as yard and garden wastes collected from CVRD drop-off depots, are taken directly to end-markets.

### Landfills

There are currently no approved municipal waste landfill sites operating in the Cowichan Valley. The closure plan for the CVRD's Koksilah Road Landfill has been completed and the site is regularly monitored.

### Demolition, Construction & Land Clearing Waste

Several burn sites for these wastes formerly operated within the CVRD, but only one, the Elizabeth Compton (PA-12982) site in the District of North Cowichan near Crofton, is currently permitted. This permit is limited to controlled open burning of up to 1500 m<sup>3</sup>/year of stumps, other land clearing debris.

In early 2002, both Harper's Recycling and Active Disposal and Recycling began accepting construction/demolition waste for sorting and recycling. Harper's Recycling separates out the wood waste for use as a hog fuel in the local Crofton Pulp and Paper Mill. Active Disposal and Recycling separates out the wood waste component for grinding into chips to be sent to the in-

vessel commercial composting operation previously mentioned, or for use as animal bedding, paddock fill, etc. Active Disposal and Recycling is also providing a free salvage/material recovery area for re-use of dimensional lumber and other recoverable materials. After all the recyclable/recoverable materials are removed, the residual waste is taken to the CVRD Bings Creek facility for eventual disposal.

Aside from these operations, remaining construction/demolition wastes are currently trucked out of the Regional District to other areas for disposal. Approved sites currently exist in the Capital Regional District and the Regional District of Nanaimo. The CVRD only accepts residential loads of construction/demolition waste for disposal, and all loads of yard and garden waste for transfer to a local composting facility.

#### Disposal Bans and/or Differential Tipping Fees.

The CVRD has completed the process of a staged implementation of a series of disposal bans aimed at reducing the amount of recyclables and prohibited materials entering the waste stream. (A list of the 58 materials affected by the disposal restrictions is provided in Appendix A.)

The first stage of implementation involved written warnings being issued to haulers and selected generators when banned materials, such as recyclables or other prohibited items, were discovered in loads of refuse. The next stage of implementation involved a system of actual fines - double the current tipping fee - when removal of the banned material was not possible, or deemed appropriate to do so by the CVRD in accordance with CVRD Bylaw No. 2108. This progressive enforcement approach has proven to be fair and effective.

#### Illegal Disposal and Enforcement.

With the introduction of significantly different and more costly disposal practices, there have been increased levels of illegal disposal. Educational initiatives and incentives will continue to be employed to minimize the number of individuals choosing inappropriate practices.

To help remedy situations where illegal disposal has taken place involving public lands, the CVRD provides incentives for individuals and community non-profit groups to take corrective action. The CVRD's free tipping policy, upon approved application, allows for disposal of waste at any of the CVRD's facilities at no charge. Certain conditions must be met, such as all recyclable material must be separated for recycling. This program has proven popular with a

variety of community groups that are taking a stewardship role with the many back roads on Crown lands or waterways. When a problem area is identified by the CVRD and corrective action is deemed necessary, a community group can be offered a financial incentive, in addition to free tipping by the CVRD, for undertaking a clean-up campaign for that site. A special annual fund is set aside for this program to support clean up of problem areas and to ensure they do not develop into unsanctioned disposal sites.

### 3.3 Progress Towards Provincial Waste Reduction Goal

In 1990, the provincial government required all regional districts to develop Solid Waste Management Plans detailing how they would contribute towards the overall goal of a 50 per cent reduction in waste disposal per person by the end of 2000. The CVRD's previous Solid Waste Management Plan was designed to achieve a 35 per cent reduction in waste by the end of 2001. Although the actual provincial average of 29.7 per cent is well short of the 50 per cent goal, the collective efforts of all concerned within the CVRD has resulted in a 52.5 per cent reduction in waste per person for the year 2000 compared to 1990 levels.

The following table shows figures used to calculate the CVRD's Waste Reduction Rate for 2000, as well as the percentage decrease in per capita waste disposal for each of the past four years, compared to the base year of 1990:

**Table 3.1 – Annual Waste Reduction Rate  
(Based on Tonnage)**

Year	1. Population	2. Waste Disposal to Non-CVRD Facilities (CDW/LCD) <sup>1</sup> <i>Tonnes</i>	3. Waste Disposal to CVRD Facilities (Transfer Station / Cache Creek) <i>Tonnes</i>	4. Alternative Waste Disposal (e.g. backyard burning) <i>Tonnes</i>	5. Total Waste Disposal <i>Tonnes</i>	6. Tonnes Per Capita Disposal Rate	7. Per Capita Disposal Rate Decrease since 1990
1990	59 059	11 000 (est.)	29 500 (actual)	4 975 (est.)	45 475 (est.)	0.770	-
1997	72 691	11 249 (est.)	30 571 (actual)	0 (est.)	41 820 (est.)	0.575	25.3 %
1998	73 735	10 500 (est.)	27 823 (actual)	0 (est.)	38 323 (est.)	0.520	32.5 %
1999	76 386	7 747 (est.)	24 164 (actual)	0 (est.)	31 911 (est.)	0.418	45.7 %
2000	76 820	4 675 (est.)	23 413 (actual)	0 (est.)	28 088 (est.)	0.366	52.5 %

Note <sup>1</sup>: Construction/Demolition Waste and Landclearing Debris

The CVRD's success in achieving the provincial waste reduction goal and surpassing our own goal ahead of schedule is due to two additional significant factors beyond the recycling and waste reduction measures mentioned earlier in this section. The first factor is a lagging economy that leads to less overall development and consumer activity and therefore less waste; and the second is that many manufacturers have refined products and packaging to reduce waste. Adjacent jurisdictions to the CVRD have also experienced similar influences regarding waste reduction.

Table 2.3 - Annual Waste Reduction Rates (Based on Tonnage)

Year	Population	Waste Disposed at CVRD Facilities (Tons)	Waste Disposed at Other Facilities (Tons)	Total Waste Disposed (Tons)	Waste Reduction Rate (%)	Provincial Target (%)
2001	16,820	4,822 (28.7%)	12,413 (74.3%)	17,235 (100%)	16.3%	15%
2002	16,820	5,107 (29.8%)	12,321 (71.9%)	17,428 (100%)	16.7%	15%
2003	16,820	5,418 (32.2%)	11,612 (67.8%)	17,030 (100%)	17.1%	15%
2004	16,820	5,717 (34.0%)	11,313 (66.0%)	17,030 (100%)	17.7%	15%
2005	16,820	6,016 (35.9%)	11,014 (64.1%)	17,030 (100%)	18.3%	15%

Source: Construction and Manufacturing Sector

# COWICHAN VALLEY REGIONAL DISTRICT SOLID WASTE MANAGEMENT PLAN

## SECTION 4 - SOLID WASTE MANAGEMENT PLAN

This section provides an outline of initiatives that the CVRD intends to pursue, in partnership with its member municipalities, private businesses and community non-profit organizations, in order to achieve waste diversion beyond the 50 per cent reduction goal of the original Solid Waste Management Plan.

### **4.1 Education and Partnership Program**

Individuals and groups within the community have achieved a significant proportion of the waste diversion that has occurred to date after they have been informed of the opportunities available. Due to the fact that in many instances the success of a given diversion initiative is dependent on an informed and involved public, the CVRD will continue to actively pursue an education and partnership program, including the following:

- Maintain the resources necessary to continue the Solid Waste Reduction Program.
- Coordinating education and partnership activities with member municipalities, First Nations and private organizations.
- Coordinating CVRD activities with Provincial programs.
- Conveying a consistent image for the solid waste programs and goals.
- Maintaining public awareness of waste diversion opportunities and goals.
- Promotion and education regarding new diversion programs.
- Participation in community events to maintain contact with the public and obtain feedback.

### **4.2 Waste Reduction and Reuse**

Both the provincial and federal governments encourage waste reduction and reuse through various guidelines and regulatory initiatives, such as the national packaging protocol that requires industry/multi-manufacturer's to reduce packaging weight by 50 per cent. However, in addition to support of programs from the senior levels of government, the CVRD will continue to pursue initiatives within the Regional District, such as the following:

Reduction and Reuse Education. The CVRD will continue to adopt, or develop educational, and promotional information specifically supporting local waste reduction and reuse initiatives.

Member municipalities will assist in implementing educational programs and distribution of information.

**Government Procurement Policies.** The CVRD and its member municipalities will develop stated policies and procedures to minimize waste produced, and seek opportunities for reuse of waste items.

**Private Waste Reduction Plans.** The CVRD will continue to provide staff assistance to larger institutional, commercial, and light industrial waste generators in determining ways and developing plans to reduce the quantity of waste needing disposal.

**Reuse and Repair Centre Support.** The CVRD will continue to help promote reuse and repair activities such as non-profit or private thrift stores and free stores. The CVRD will also investigate opportunities to establish a limited reuse facility at its Bings Creek Solid Waste Management Complex.

#### **4.3 Recycling and Recyclables Processing**

The CVRD will continue to support recycling within the Plan area through the implementation of the following initiatives:

- The gradual phasing out of the existing Multi-Product Neighbourhood Recycling Bin collection program after the other elements of the recycling plan are fully established.
- Further participation in recycling programs by all sectors will be encouraged by the CVRD through promotion of current disposal restrictions under CVRD Bylaw No. 2108, and subsequent amendments thereto. Particular emphasis will be placed on producers of commercial organic waste.

#### **4.4 Materials Recovery**

The first amendment of the Solid Waste Management Plan identified that the Materials Recovery Facility, for sorting and processing recyclables, would be located at the Bings Creek Solid Waste Management Complex. However, construction and operation of a Materials Recovery Facility, as part of the waste management functions at Bings Creek, has been deferred in accordance with the CVRD Board resolution of December 17, 1997:

*“That construction of the Material Recovery Facility be deferred until the volume of recyclables is sufficient to justify a local Material Recovery Facility.”*

In the interim, a private Materials Recovery Facility has been established at the former Koksilah Road incinerator site. This facility processes recyclables from the CVRD, the member municipalities’ curbside collection programs, as well as from private sources.

The CVRD will continue to support private sector materials recovery initiatives through the ongoing implementation of expanded recycling programs.

#### **4.5 Composting**

The CVRD’s original intent to develop a composting facility for yard and garden material and clean wood waste has been displaced by the construction of a private sector, large-scale, in-vessel composting facility in Cobble Hill. This facility has ample capacity to process all suitable organic materials that may be generated within the CVRD. In addition, a landscaping firm in Cobble Hill provides a processing service for yard and garden material.

The CVRD will continue to support private local composting and processing operations through disposal restrictions of yard and garden material, commercial loads of construction/demolition waste, commercial organic/food waste, and all landclearing waste. CVRD drop-off depots will also continue to accept yard and garden materials for transfer to local processing facilities.

The CVRD may expand the current disposal restrictions on commercial organic waste to include residential organic/food waste, and/or post-consumer commercial organic/food waste, i.e. plate scrapings.

#### **4.6 Construction and Demolition Wastes**

The CVRD will seek the cooperation of its member municipalities and the private firms active in the building trades to provide opportunities for reducing the amount of construction and demolition waste requiring disposal. The following initiatives will be implemented.

**Salvaging:** The CVRD, in co-operation with its member municipalities, will develop a requirement that construction and demolition projects provide the opportunity for salvage of materials. This may involve amendments to building bylaws, such that building and demolition permits allow only the residuals, following salvage operations, to be taken to disposal.

**Source Separation:** The CVRD will seek agreements with its member municipalities to ensure that specific sorting and waste segregation requirements are consistently applied following material salvage. This agreement would be a condition of all new building construction and demolition permits issued within the CVRD boundaries. Simple separation of wastes into major type categories at the construction site can greatly facilitate processing for materials recovery. The CVRD will develop program guidelines to assist local builders in establishing effective site sorting techniques and waste reduction programs.

**Recycling and Disposal Facilities:** As described in Section 3.2, several private sector facilities currently exist for recycling most construction/demolition waste, and for disposal of the remaining residual. To expand access for recycling of clean wood waste, the CVRD will consider utilizing one of the tipping bays at the Bings Creek Solid Waste Management Complex for this material. The clean wood waste, possibly mixed with materials such as landclearing waste and waxed cardboard, would then be transferred to one of the local firms capable of accepting this material for processing into mulch, compost, or another marketable material.

The CVRD will also work with the private sector to establish and promote new facilities where suitable zoning exists.

#### **4.7 Landclearing Wastes**

The CVRD will seek the cooperation of its member municipalities and the private firms active in landclearing and development, to provide opportunities for further reducing the amount of landclearing waste requiring disposal.

**Source Management:** The CVRD will seek agreement with its member municipalities on specific sorting and waste segregation requirements to be applied, where possible, to the subdivision, clearance, or other development of land. Simple segregation techniques, by waste type or size, can greatly facilitate processing for materials recovery. A CVRD program establishing acceptable site sorting practices will assist local developers.



**Controlled Burning:** Because of the long-accepted practice of burning, either at the site itself, or at private accumulation sites, there is significant potential for resistance to new practices based on more stringent site controls and recovery processing. The province is encouraged to develop and maintain clear and consistent guidance regarding the role, if any, that pile burning, or the use of more controlled, combustion techniques, can continue to play in managing this waste stream.

The CVRD will continue to promote composting and/or chipping as some alternatives to open burning of organic material. This is in response to the human health risks caused by small, airborne particulate that result from the open burning of organic waste, and the environmental impacts such as the addition of greenhouse gases, which contributes towards global climate change.

**New Facilities:** The CVRD will work with the private sector to establish and promote new facilities where suitable zoning exists.

#### **4.8 Household Hazardous Waste**

The CVRD will continue to take the following actions with regard to household hazardous waste:

- cooperate with and assist in the promotion of provincial initiatives;
- incorporate household hazardous waste into the overall education and partnership programming;
- support industry funded and operated management initiatives by imposing disposal bans on specific targeted products;
- promote waste exchanges or swap days for materials, such as paint, that are developed by local community groups or provincial manufacturing associations;
- consider provision for collection and disposal of specific items through the CVRD depot service centres on an ongoing or periodically scheduled basis, in partnership with industry stewardship programs;
- evaluate the feasibility of cooperative CVRD-Industrial/Commercial/Institutional sector programs for the collection, recycling, or retrievable disposal of problematic items, such as leftover hazardous cleaners, for which stewardship/return programs do not currently exist.

#### **4.9 Marketing and Market Development**

All the existing CVRD recycling programs are based on utilization of already developed private sector markets or industry stewardship programs. In some cases, such as organic wastes, the full range and extent of the market is still under development by the private sector firms involved.

Where feasible, the CVRD will encourage market development through initiatives such as:

- promotion of the use of the B.C. Materials Exchange;
- development of specific initiatives to encourage local markets, or uses for secondary materials, such as the local Cowichan Recycling Exchange that operates in cooperation with the local News Leader newspaper.

#### **4.10 Solid Waste Management Complex**

Changes in the waste disposal system and the development of private sector waste management facilities have somewhat altered the role of the Bings Creek Solid Waste Management Complex. With the facility's focus currently on recycling and waste export, most new developments at Bings Creek will reflect changes in the recycling services offered, as long-term direction beyond waste export is not defined at this time. Changes in recycling services will be in response to private sector waste management practices and available facilities. For example, the following facilities originally cited in the Plan to be built at Bings Creek have been developed by the private sector and would not be pursued by the CVRD unless there was a withdrawal in the service by the private sector.

- A Materials Recovery Facility for sorting, preparation, short-term storage and transport load-out of recyclable materials;
- A processing area providing screening, shredding, chipping, magnetic separation, and/or other unit processes needed for conversion of portions of the landclearing and construction demolition waste streams to useable products;
- A composting facility constructed initially for composting of yard waste and brushy portions of the land clearing wastes.

#### **4.11 Interim Residual Waste Disposal**

The CVRD received public acceptance to continue the existing practice of waste export through 2006 as documented in the *Report on Public Consultation, Solid Waste Management Plan Amendment No. 2*. As detailed in Section 2.6, the CVRD intends to continue to dispose of residual waste through export from the Region for a further period of five years (until December 31, 2006). During this period, exploration of other long-term disposal options, as discussed in Section 4.12, will be carried out in consultation with the public.

#### **4.12 Long-Term Residual Waste Disposal**

As part of the public consultation process, the CVRD also sought public input on long-term disposal options that would be reviewed while waste export continued. A range of traditional disposal options was presented, as well as the option to pursue new technologies. This approach was used to allow the CVRD the greatest flexibility possible in taking advantage of long-term disposal opportunities.

The options presented were conceptual in nature, with no detailed costs or specific sites defined. Although the public endorsed some options more than others, this approach gave the CVRD the ability to pursue long-term residual waste disposal options knowing the initial level of public acceptance for the various options. Initial consultation documents also noted that all options and costs would be defined and presented for public review before any final decisions are made. The CVRD will, therefore, research and pursue long-term residual waste disposal options during the term of the CVRD's waste export agreement, and ensure the public has opportunity for input into that process.

#### **4.13 Waste Diversion**

As noted in Section 3.3, the CVRD has achieved, and slightly surpassed, the provincial waste diversion goal of 50 per cent by the year 2000. In the absence of any new provincial goals, the CVRD has adopted an overall goal of working towards zero waste, as directed by the following Engineering Services Committee resolution of November 26, 2001.

***“That it be recommended that the CVRD set itself a goal of working towards “zero waste” in the finalizing of its Solid Waste Management Plan Amendment No. 2.”***

Although no particular target date has been set, the initiatives included in this Plan will be pursued with this goal in mind. The public consultation results demonstrated very strong support for more waste reduction initiatives, with over 90 percent of respondents in agreement. In particular the concept of “zero waste” also showed strong support with over 70 per cent in agreement, and only 8 per cent in disagreement.

#### **4.14 Facility Closures**

To complete the transition from incineration-based disposal to the CVRD's current waste management system, closure of three ash residue landfills adjacent to the CVRD's old incinerator sites will be carried out. The Regional District has also identified eleven sites that are old landfill sites or have been damaged by prolonged non-sanctioned refuse dumping. One of these sites has recently been remediated to allow for development. Each of the remaining ten sites will receive rehabilitation or closure measures appropriate to the assessed environmental impairment. The current practise of disposal of screenings from the Cowichan Bay Sewage Treatment Plant and from the Town of Ladysmith Sewage Treatment Plant will continue on an interim basis until the Cowichan Bay plant is decommissioned.

#### **4.15 Illegal Disposal**

Nuisance level illegal disposal has historically occurred in remote areas of the Cowichan Valley. As noted in Section 3.3, this is addressed by community clean up, supported by CVRD financial incentives. However, larger scale, illegal dumpsites, operated by the landowner for profit, have recently become known. Typically, these sites receive landclearing waste and construction/demolition waste, often from outside the CVRD for very low charges. In order to address this issue, the CVRD, in conjunction with member municipalities, will consider amendments to zoning bylaws that would make acceptance of these types of waste permitted only in very limited zones.

#### **4.16 Regulation of Wastestream**

The CVRD will develop a bylaw(s) to regulate municipal solid waste, composting, and recycled materials facilities. Examples of the aspects of operation that could be regulated include, but are not limited to, the following:

- Quantities of materials stored on site
- Quantities of materials received and shipped
- Reporting of types and quantities of materials received and shipped
- Reporting of sources of materials and markets shipped to
- Processing of materials on site
- Payment of licensing fees, bonds, fees for infrastructure cost recovery, and penalties for contravention of the bylaw.

#### **4.17 Funding**

Adequate funding will be provided by the CVRD for implementation of the waste management program and services of this Plan. Funds will come from several sources and will be balanced using a method that is generally consistent with the following:

- Costs that generally benefit all property owners within the Regional District and are not directly related to quantity of wastes generated for disposal or actual use of the system will be recovered through property tax assessments. Such costs are considered to include a portion of the capital cost of establishing the new system, education and promotion, and general program administration and operation.
- Costs that are related to the level of use will be recovered through user fees such as tipping fees and curbside collection fees.
- Costs that reflect use of the system beyond the standard level of service will be covered through a system of additional fees and surcharges. Examples of such additional fees are for the management of extra bags or cans of refuse during route collection, added services provided by collectors, penalties for inclusion of banned materials as refuse, etc.



**COWICHAN VALLEY REGIONAL DISTRICT  
SOLID WASTE MANAGEMENT PLAN**

**SECTION 5 – PROJECTED WASTE REDUCTION, IMPLEMENTATION AND COSTS**

This section summarizes the broad effects of this Plan in achieving waste reduction and the currently anticipated costs of plan implementation.

This Plan addresses the waste management system that will serve residents of the CVRD over the next five years. The initiatives described herein focus on the maintenance of a stable waste management environment and reductions in waste residue beyond the current level of 52.5 per cent. Further reduction in waste will be in accordance with pronounced public support for waste reduction initiatives based on recent public consultation. Although no fixed target date has been set, the CVRD has adopted the objective of working towards a goal of zero waste.

**5.1 Projected Waste Reduction**

It is anticipated that significant progress towards the zero waste goal may be achieved over the next five years by the measures identified in this Plan. The component of the waste stream with the greatest potential for diversion, due to new initiatives, is compostable organics. Analysis, carried out in 1992, indicated that compostable organics comprised approximately 28% of the total solid waste stream. This includes yard and garden material, food waste and clean wood waste from construction/demolition and landclearing activities. As other recyclables are removed from the wastestream, and the wastestream itself is reduced, the organic component, as a percentage, is increased.

In addition, initiatives directed towards expansion of existing programs, in terms of participation and materials accepted, should also have a positive effect on reducing the amount of material requiring disposal. The CVRD has established a number of programs, facilities and disposal restrictions in recent years, but there is an opportunity for greater participation from residents and the business sector in particular.

Waste reduction programs will also continue to evolve as they are fine-tuned to become more user-friendly and accessible. For example, the inclusion of all clean plastics (stamped #1 - #7, including

plastic film) with curbside recycling collection began in January 2001 and there has been a notable increase in participation and materials collected at curbside since that time.

Tipping fees for some hard-to-manage items such as scrap tires, oil filters and CFC appliances have been eliminated to make recycling more accessible to everyone. New programs for used antifreeze, refillable as well as disposable propane tanks, rechargeable and disposable household batteries and fluorescent tubes have been added – with no tipping fee applied for residential quantities.

In addition, there remain significant quantities of non-compostable construction/demolition and landclearing waste, which, through better on-site management, are anticipated to be diverted from the waste stream. Although, not a direct result of CVRD programs, provincial and federal government initiatives, particularly in areas such as industry stewardship programs and reduced packaging promotion, are expected to result in incremental increases in diversion over the next few years.

The overall improvement in waste diversion, due to the sum of the previously described effects, is difficult to quantify, although, it may be noted that during 2001 there has been a further 5 to 10 per cent decline in the CVRD managed waste stream from the previous year. It has also been reported that a comprehensive private sector organics and recyclables collection program, operated at the Arbutus Ridge retirement community, has achieved an 86 per cent diversion rate. Results of this nature make the long-term goal of zero waste seem more attainable than previously perceived as recently as five years ago.

## **5.2 Implementation**

Implementation of this Plan will take place over then next five-year period from 2002 through 2006. Focus will be on continuing and expanding waste reduction programs, and laying the framework for more permanent, long-term waste management solutions.

**Capital Costs.** The capital costs associated with construction of new facilities and conversion, or closure of existing facilities, as discussed in Section 4, are summarized in Table 5-1A.



**TABLE 5-1A  
ESTIMATED CAPITAL COSTS FOR SOLID WASTE RECEIVING,  
PROCESSING & DISPOSAL FACILITIES**

Facilities	Estimated Capital Cost <sup>1</sup>	Annual Debt Service <sup>2</sup>	Probable Year of Construction
<b><u>DROP-OFF DEPOTS</u></b>			
New site, South	438,000	41,200	2003
<b><u>SOLID WASTE MANAGEMENT COMPLEX</u></b>			
Material Recovery Facility	2,630,000	247,000	as required
Yard Waste Composting	519,000	48,800	as required
LCW/CDW Processing	1,770,000	166,000	as required
<b><u>LANDFILL CLOSURES</u></b>			
Ash fills	153,000	14,400	2002
Abandoned Landfills	381,000	35,800	2003
<b>TOTAL</b>	<b>5,891,000</b>	<b>553,200</b>	

<sup>1</sup> - construction cost estimates from the Stage 2 report have been adjusted to reflect 2001 as the base year.

<sup>2</sup> - assumes debt service at 9.4% of capital (approx. 7% interest rate over 20 years).

Operations and Maintenance Costs. The annual operations and maintenance costs associated with operating the proposed facilities and providing services within the plan are summarized in Table 5.1B.

**TABLE 5.1B  
ESTIMATED OPERATING AND MAINTENANCE COSTS  
OF SOLID WASTE RECEIVING, PROCESSING & DISPOSAL FACILITIES**

Facilities	Opr & Mtce Costs 2001\$/yr	Probable Year Initiated
<b><u>SOLID WASTE MANAGEMENT COMPLEX</u></b>		
Material Recovery Facility	717,000	as required
Yard Waste Composting	82,000	as required
LCW/CDW Processing	362,000	as required
<b><u>LANDFILL CLOSURES</u></b>		
Ash fills	22,200	2002
Abandoned Landfills	22,100	2003
<b>TOTAL</b>	<b>1,324,300</b>	



**COWICHAN VALLEY REGIONAL DISTRICT  
SOLID WASTE MANAGEMENT PLAN**

**SECTION 6 - APPROVAL, MONITORING AND AMENDMENTS**

**6.1 Board Approval of Plan**

**6.1.1 The Solid Waste Management Plan**

The Solid Waste Management Plan was approved by the CVRD Board of Directors on November 22, 1995.

The list of directors was as follows:

- City of Duncan - Michael Coleman
- District of North Cowichan - Rex Hollett, Glen Ridgway, Tom Walker
- Town of Ladysmith - Rob Hutchins
- Village of Lake Cowichan - Earle Darling
- Electoral Area 'A' - Mill Bay/Malahat - Mike Renning
- Electoral Area 'B' - Shawnigan Lake - David Towner
- Electoral Area 'C' - Cobble Hill - Richard Hughes
- Electoral Area 'D' - Cowichan Bay - Don Robinson
- Electoral Area 'E' - Cowichan Station/Sahtlam/Glenora - John Clarkson
- Electoral Area 'F' - Cowichan Lake South/Skutz Falls - Joseph Allan
- Electoral Area 'G' - Saltair/Gulf Islands - Leonard Platt
- Electoral Area 'H' - North Oyster/Diamond - Bruce Cooper
- Electoral Area 'T' - Youbou/Meade Creek - Lois Gage

The resolution of the Board was as follows:

*"That the following documents:*

- 1. COWICHAN VALLEY REGIONAL DISTRICT SOLID WASTE MANAGEMENT PLAN dated November 15, 1995, prepared by Dayton & Knight Ltd., Consulting Engineers.**
- 2. PRELIMINARY GEOTECHNICAL AND HYDROGEOLOGICAL ASSESSMENT OF LANDFILL SITE D1 dated October 1995, prepared by Piteau Associates.**

3. **REPORT ON PUBLIC CONSULTATION FOR THE CVRD'S STAGE 3 SOLID WASTE MANAGEMENT PLAN** dated November 15, 1995, prepared by Context Research Ltd.
4. **SWMP - SITE D-1 PHASE 1 ASSESSMENT** letter dated November 6, 1995, prepared by Dayton & Knight Ltd.

*comprising the Cowichan Valley Regional District's Stage 3 Solid Waste Management Plan be accepted and be forwarded to the Minister of Environment, Lands and Parks for acceptance."*

#### 6.1.2 Amendment No. 1

The Solid Waste Management Plan Amendment No. 1 was approved by the CVRD Board of Directors on June 25, 1997.

The list of directors was as follows:

- City of Duncan - Michael Coleman
- District of North Cowichan - Anne Murray, Glen Ridgway, Tom Walker
- Town of Ladysmith - Robert Hutchins
- Town of Lake Cowichan - Jean Brown
- Electoral Area "A" - Mill Bay/Malahat - Charlie Boas
- Electoral Area "B" - Shawnigan Lake - Bill Davies
- Electoral Area "C" - Cobble Hill - Richard Hughes
- Electoral Area "D" - Cowichan Bay - Don Robinson
- Electoral Area "E" - Cowichan Station/Sahtlam/Glenora - John Clarkson
- Electoral Area "F" - Cowichan Lake South/Skutz Falls - Joseph Allan
- Electoral Area "G" - Saltair/Gulf Islands - Glen Maddin
- Electoral Area "H" - North Oyster/Diamond - Mary Marcotte
- Electoral Area "I" - Youbou/Meade Creek - Jack Waite

The resolutions of the Board were as follows:

1. At its regular meeting of June 11, 1997, the Cowichan Valley Regional District Board of Directors resolved:

***“That the Context Research Ltd. report entitled SUPPLEMENTARY REPORT ON PUBLIC CONSULTATION FOR AN AMENDMENT TO THE CVRD’s SOLID WASTE MANAGEMENT PLAN, dated June 4, 1997, and recommendations be accepted, and, together with the REPORT ON THE FEBRUARY 27, 1997 OPEN HOUSE FOR: CVRD SWMP AMENDMENT AND HILL 60 LANDFILL INFORMATION, be included in the package to be forwarded to the Minister of Environment, Lands and Parks for approval of the CVRD’s Solid Waste Management Plan Amendment No. 1.”***

2. At its regular meeting of June 25, 1997, the Cowichan Valley Regional District Board of Directors resolved:

***“That the Dayton & Knight Ltd. report entitled FINAL DRAFT COWICHAN VALLEY REGIONAL DISTRICT SOLID WASTE MANAGEMENT PLAN - November 15, 1995 - AMENDMENT NO. 1 JUNE 1997, as amended by the Landfill Acquisition Committee June 25, 1997 be forwarded to the Minister of Environment, Lands and Parks for approval.”***

6.1.3 Amendment No. 2

On August 28, 2002, the CVRD Board of Directors approved the Solid Waste Management Plan Amendment No. 2.

The list of directors was as follows:

- City of Duncan - Michael Coleman
- District of North Cowichan - Rex Hollett, Glen Ridgway, Tom Walker
- Town of Ladysmith - Robert Hutchins
- Town of Lake Cowichan - Jack Peake
- Electoral Area "A" - Mill Bay/Malahat - Anne Bomford
- Electoral Area "B" - Shawnigan Lake - Rick Spencer
- Electoral Area "C" - Cobble Hill - Richard Hughes
- Electoral Area "D" - Cowichan Bay - Alex Robertson
- Electoral Area "E" - Cowichan Station/Sahtlam/Glenora - Loren Duncan
- Electoral Area "F" - Cowichan Lake South/Skutz Falls - Joseph Allan
- Electoral Area "G" - Saltair/Gulf Islands - Rene Beaudin
- Electoral Area "H" - North Oyster/Diamond - Mary Marcotte
- Electoral Area "I" - Youbou/Meade Creek - Tara Daly

The resolutions of the Board were as follows:

*That the Cowichan Valley Regional District accept the following recommendations of the Roundtable on the Environment:*

- 1. That the Public Consultation Report Amendment No. 2 be endorsed as presented;*
- 2. That the wording of Section 4.16 of the Waste Management Plan Regulation of Wastestream be amended as follows: "The CVRD will develop a bylaw(s) to regulate municipal solid waste, composting, and recycled materials facilities";*
- 3. That the wording of the second bullet of Section 4.1 of the Solid Waste Management Plan Education and Partnership Program be amended as follows: "Coordinating education and partnership activities with member municipalities, First Nations and private organizations".*
- 4. That the draft CVRD Solid Waste Management Plan Amendment No. 2 be endorsed as presented June 25, 2002, with the above noted amendments;*

*and further that the following wording be added to Section 4.14 – Facility Closures:*

*"The current practise of disposal of screenings from the Cowichan Bay Sewage Treatment Plant and from the Town of Ladysmith Sewage treatment plant will continue on an interim basis until the Cowichan Bay plant is decommissioned";*

*and further that the Solid Waste Management Plan Amendment No. 2 document and the Public Consultation Report be submitted to the Minister of Water, Lands and Air Protection for approval.*

## **6.2 Monitoring and Reporting**

The CVRD will track the progress of its Plan by preparing a brief annual report summarizing disposal quantities and waste reduction program activities regarding actual waste diversion. Individual programs will be evaluated periodically by the CVRD to assess their impact and effectiveness. Solid waste quantities, composition, and other characteristics and their impacts on regional and municipal programs will be updated by the CVRD every 5 years. Results of periodic reassessments and update studies will be included with the annual report.

The CVRD Roundtable on the Environment, which will act as the Plan Monitoring Committee, incorporating members from the general public, representatives of governmental and non-governmental agencies, and staff personnel, has been formed by CVRD to monitor CVRD progress in implementing the Plan. The Committee will report its findings to the CVRD Board of Directors.

## **6.3 Amendment Process**

Changes in factors such as market conditions, waste generation or composition, resource

availability, demographic changes; technology, etc. may make deviation from the approved Solid Waste Management Plan desirable and/or necessary.

The failure to open, or premature closing, of major facilities may require major plan amendments. Schedule delays, or lesser deviations, will require only minor amendments. It is assumed that the Ministry of Water, Land and Air Protection will determine whether a particular deviation requires a major or minor amendment, or any amendments at all.

Minor Plan Amendments. The CVRD will make minor amendments to the Plan by documenting the changes in consultation with appropriate stakeholders, the Ministry of Water, Land and Air Protection and the Plan Monitoring Committee. The documented amendment would then be submitted to the Ministry for approval.

Major Plan Amendments. The CVRD will make major amendments to the Plan by discussing the changed conditions and proposed amendments with:

- Appropriate stakeholders
- Member municipalities and adjacent Regional Districts
- Ministry of Water, Land and Air Protection
- The Plan Monitoring Committee
- The general public

CVRD staff will consider the responses from the other groups, and work with the Engineering Services Committee to finalize the proposed amendments for approval by the CVRD Board of Directors.

The documented and Board approved amendment would then be submitted to the Ministry for approval.





**APPENDIX A**  
**GARBAGE DISPOSAL RESTRICTIONS**





C·V·R·D

# NOTICE

## - New Garbage Disposal Restrictions -

RECYCLABLES	RECYCLING OPTIONS ✓			
	Curbside Recycling (all areas)	CVRD Recycling Facilities	Local Businesses	Check these listings/headings in the new 2001 CVRD Recycling Directory (contact the CVRD Recycling Hotline or website to receive or view your free directory, or contact your waste management firm)
1. Commercial Organic Material			✓	Compostable Organics
2. Refundable Beverage Containers			✓	Aluminum, Drink Boxes, Glass Containers, Plastic, Tin Cans
3. Used Motor Oil			✓	Oil
4. Residual Paint Products			✓	Paint
5. Household Hazardous Waste			✓	Household Special Wastes
6. Pharmaceuticals			✓	Pharmaceutical Medications
7. Asphalt Roofing Materials		✓*		Asphalt Roofing Shingles and Materials
8. CFC Appliances		✓	✓	Appliances
9. Directories (telephone books)	✓	✓	✓	Telephone Books (save for annual school fundraiser)
10. Gypsum Board/Drywall		✓*		Drywall/Gypsum
11. #1 Plastic Containers	✓	✓	✓	Plastic
12. #2 Plastic Containers	✓	✓	✓	Plastic
13. Lead-Acid (vehicle) Batteries		✓	✓	Batteries, Scrap Metal
14. Metal Containers (tin cans)	✓	✓	✓	Buckets/Drums/Cans, Tin Cans, Scrap Metal
15. Aluminum Foil Items	✓	✓	✓	Aluminum, Scrap Metal
16. Mixed Waste Paper	✓	✓	✓	Boxboard, Egg Cartons, Feed Bags, Junk Mail, Magazines/Catalogues, Paper, Telephone Books
17. Newspaper and Inserts	✓	✓	✓	Paper
18. Cardboard (unwaxed)	✓	✓	✓	Cardboard (unwaxed)
19. Scrap Metal		✓	✓	Automobiles, Ballasts, Batteries, Propane Tanks, Scrap Metal, Wire Rope Cable and Culverts
20. Scrap Tires		✓	✓	Scrap Tires
21. Used Oil Filters		✓	✓	Oil Filters
22. White Goods (appliances)		✓	✓	Appliances, Scrap Metal
23. Yard and Garden Material		✓	✓	Compostable Organics
24. Refillable Propane Tanks		✓	✓	Propane Tanks, Scrap Metal
25. Non-refillable Propane Tanks		✓	✓	Propane Tanks
26. Used Antifreeze		✓	✓	Antifreeze

\*CVRD Bings Creek site only

A few items of note are:

- 'Commercial Organics' - this applies mainly to businesses that sell or serve food – not to residential waste. All such organics are accepted at a new, local commercial composting facility and at a lower cost than CVRD disposal facilities;
- Items #2 through #6 - these are easily recycled through provincial stewardship programs which require any operation that sells that type of item to accept it back at no charge (e.g. used motor oil can be returned to any retailer that sells motor oil). The only exception in this category is 'Refundable Beverage Containers'. All these containers can be returned to your retailer for recycling - and a refund, as there is now a deposit fee charged on any alcoholic or non-alcoholic, ready-to-drink beverage sold today, except milk or milk substitutes.

**CVRD RECYCLING HOTLINE: 746-2640**  
 or in the Ladysmith area 1-800-665-3955 or CVRD Website [www.cvrdbinc.ca](http://www.cvrdbinc.ca)

The following materials are currently accepted for disposal or recycling by specialized waste management firms. They are not accepted at any CVRD waste management facility or through the curbside collection programs.

<b>PROHIBITED ITEMS</b>	<b>OPTIONS</b> <i>Check these listings/ headings in the new 2001 CVRD Recycling Directory (contact the CVRD Recycling Hotline or website to receive or view your free directory, or contact your waste management firm)</i>
27. Special Waste	<i>Household Special Wastes</i>
28. Industrial Waste	<i>Building Materials, Construction &amp; Demolition Waste/Salvage, Landclearing Debris, Wood Wastes</i>
29. Inflammable Materials	<i>Household Special Waste</i>
30. Hazardous Waste	<i>Household Special Waste</i>
31. Hazardous or Reactive Chemicals	<i>Household Special Waste</i>
32. Explosives	<i>Household Special Waste</i>
33. Liquids or Sludge	<i>Animal By-Products, Compostable Organics, Household Special Wastes,</i>
34. Loads Smouldering or on Fire	<i>Contact Local Fire Department</i>
35. Large Bulky or Heavy Articles	<i>Construction &amp; Demolition Waste/Salvage</i>
36. Dead Animals and Parts	<i>Animal By-Products, Compostable Organics</i>
37. Hospital Sharps, Body Tissue or Fluids	<i>Household Special Wastes, Syringes/Sharps</i>
38. Tight-Head Barrels	<i>Buckets Drums Cans, Scrap Metal</i>
39. Demolition Waste (commercial quantities)	<i>Construction &amp; Demolition Waste/Salvage</i>
40. Asbestos Insulation	<i>Asbestos</i>
41. Radioactive Material	<i>Household Special Waste</i>
42. Strong Offensive Smelling Loads	<i>Animal By-Products, Compostable Organics, Household Special Wastes</i>

<b>PROHIBITED ITEMS</b>	<b>OPTIONS</b> <i>Check these listings/ headings in the new 2001 CVRD Recycling Directory (contact the CVRD Recycling Hotline or website to receive or view your free directory, or contact your waste management firm)</i>
43. Waste Oil or Petroleum By-Products	<i>Oil, Oil Filters, Household Special Wastes</i>
44. Stumps	<i>Landclearing Debris, Wood Wastes</i>
45. Gas Cylinders	<i>Buckets Drums Cans, Propane Tanks, Scrap Metal</i>
46. Confidential Files/Reports	<i>Paper</i>
47. Clean Wood Waste / Landclearing Debris	<i>Compostable Organics, Landclearing Debris, Wood Wastes</i>
48. Aggregate	<i>Asphalt Pavement, Concrete, Construction &amp; Demolition Waste/Salvage</i>
49. Asbestos Cement	<i>Asbestos</i>
50. Waste Asbestos	<i>Asbestos</i>
51. Asphalt	<i>Asphalt Pavement</i>
52. Concrete	<i>Concrete</i>
53. Contaminated Soil	<i>Construction &amp; Demolition Waste/Salvage, Household Special Wastes</i>
54. Soot	<i>Compostable Organics</i>
55. Rubble	<i>Asphalt Pavement, Concrete, Construction &amp; Demolition Waste/Salvage</i>
56. Sterilized Biomedical Waste	<i>Household Special Waste</i>
57. Biomedical Waste	<i>Household Special Waste</i>
58. Clean Soil	<i>Compostable Organics</i>

**Save Money and Avoid the Penalty: \$85.00/tonne x 2 = \$170.00/tonne**

Recycling is free for most items if you use your curbside collection system or CVRD depots. Even if you have commercial garbage collection for your business, recycling can save money. On the other hand, if you or your garbage hauler delivers garbage containing recyclable items, the disposal fee of \$85/tonne will be doubled to \$170/tonne. That is a hefty price to pay and whoever delivers your garbage will not be happy. In fact, your garbage hauler may just leave it behind for you to deal with the next time. Hopefully that will not happen, but for some people, that may be what it takes for them to realize that recycling makes sense.

**FIGURE 1**

**EXISTING FACILITIES**

**AND**

**ABANDONED SITES**

