

**SKEENA-QUEEN CHARLOTTE REGIONAL DISTRICT  
REGIONAL SOLID WASTE MANAGEMENT PLAN**

**BYLAW 263**

---

Being a By-law to adopt a Regional Solid Waste Management Plan for the Skeena-Queen Charlotte Regional District.

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*Whereas* the Ministry of Environment has approved of at the Board has adopted a Regional Solid Waste Management Plan Stage 2 Report.

*And Whereas* the Board has adopted Bylaw 257 to establish a Regional District Solid Waste Management Local Service.

*Therefore* the Regional District of Skeena-Queen Charlotte, in open meeting assembled, enacts as follows:

1. Schedule A attached hereto and made part of this By-Law as the Regional Solid Waste Management Plan of the Skeena-Queen Charlotte Regional District.
2. This By-Law may be cited as the Regional Solid Waste Management Plan.

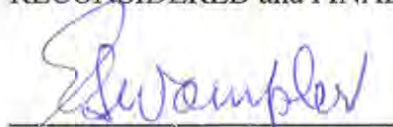
*READ A FIRST TIME* this 26th day of August, 1994.


*READ A SECOND TIME* this 28th day of October, 1994.

*READ A THIRD TIME* this 28th day of October, 1994.

Received the approval from the Minister of Environment, this 22nd day of December, 1995.

RECONSIDERED and FINALLY PASSED AND ADOPTED this 26th day of Jan 1996.

  
\_\_\_\_\_  
E. Wampler  
Chairman

  
\_\_\_\_\_  
B.E. Barnewall, CMC  
Secretary-Treasurer

I hereby certify that this is a true  
copy of the Skeena-Queen Charlotte  
Solid Waste Bylaw No. 263, 1996.

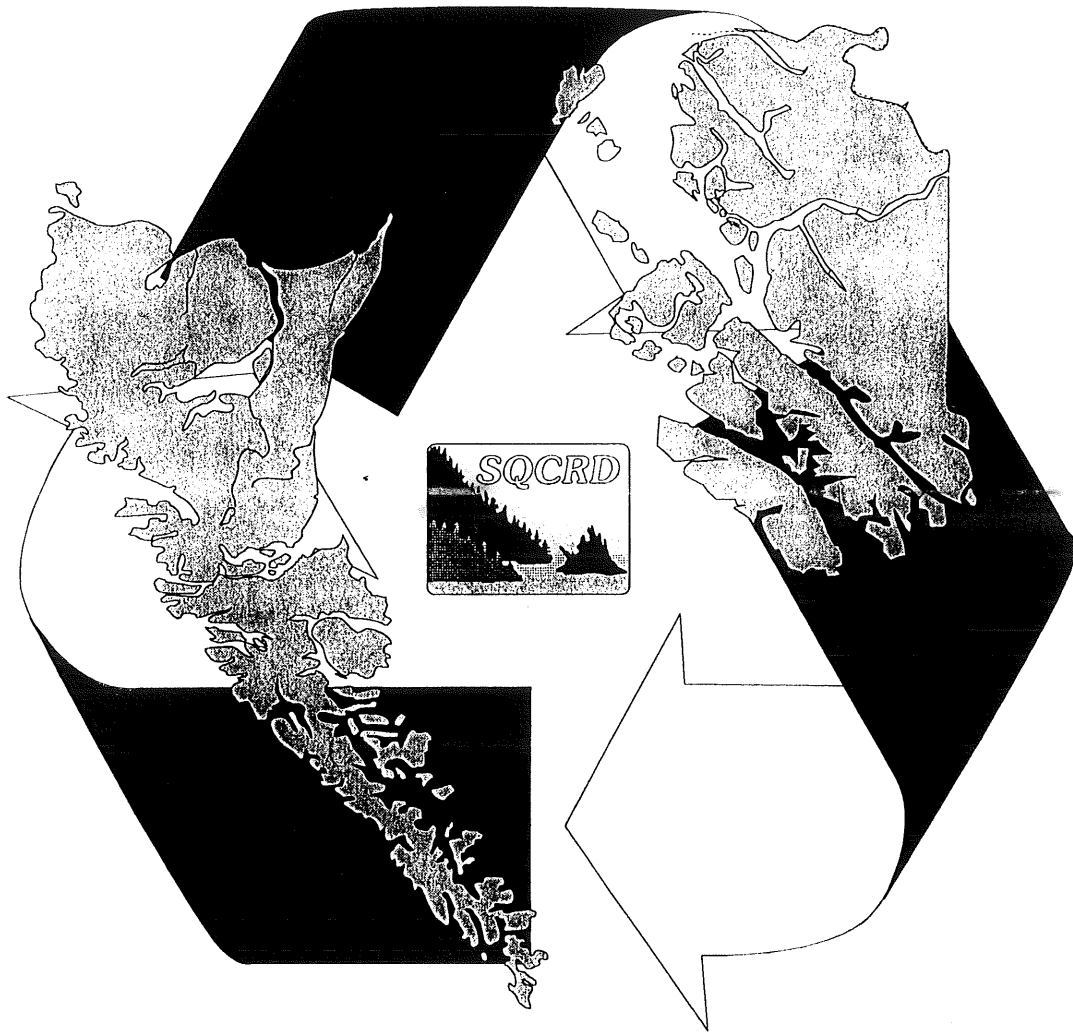
\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Date



SKEENA-QUEEN CHARLOTTE REGIONAL DISTRICT

# REGIONAL SOLID WASTE MANAGEMENT PLAN



## STAGE THREE

*Schedule "A"*  
*Bylaw 263*  
*January, 1996*

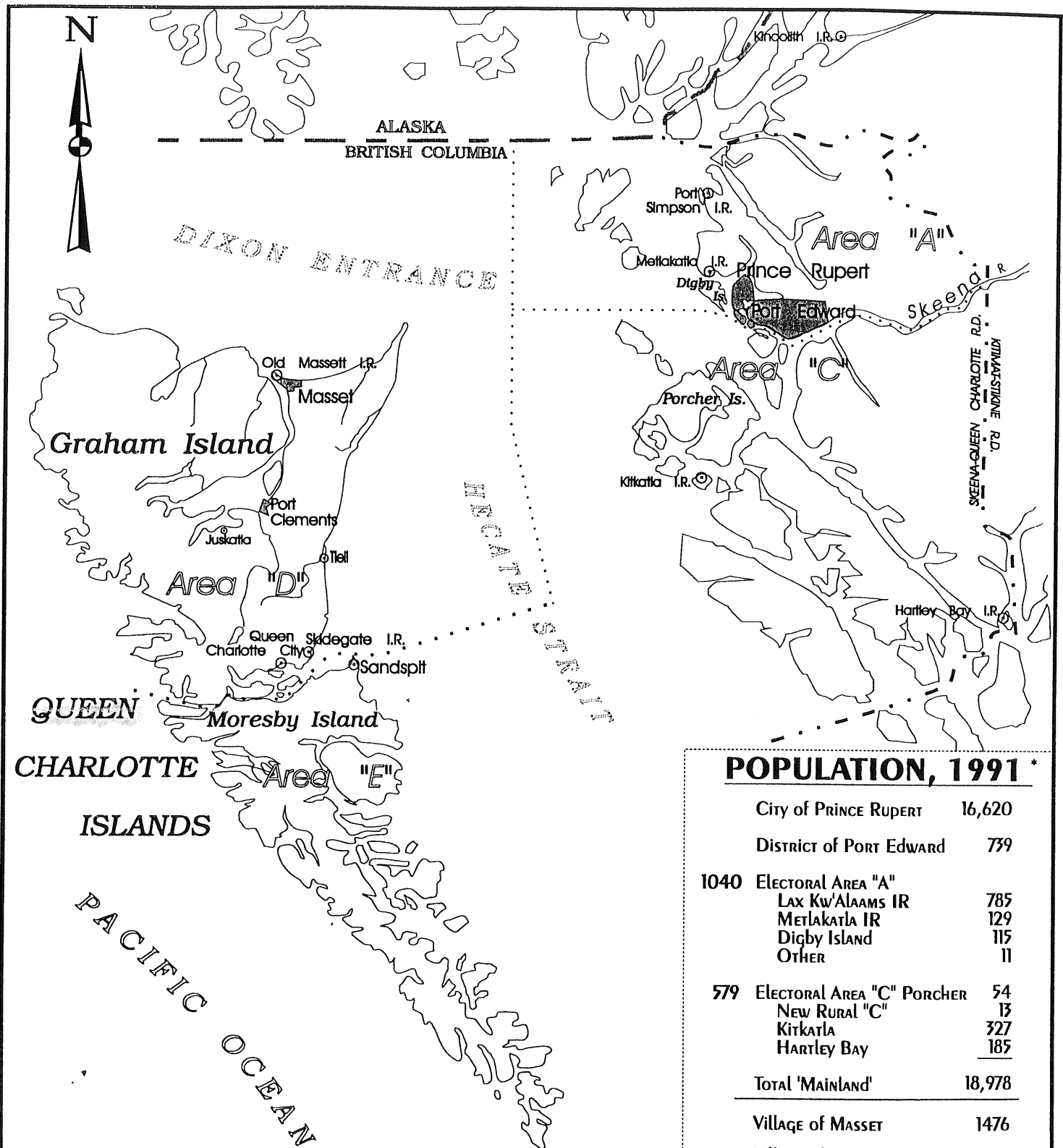
# Skeena-Queen Charlotte Regional District

## SOLID WASTE MANAGEMENT PLAN

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### POPULATION, 1991 \*

City of Prince Rupert 16,620

District of Port Edward 739

**1040** ELECTORAL AREA "A"  
 Lax Kw'Alaams IR 785  
 Metlakatla IR 129  
 Digby Island 115  
 OTHER 11

**579** ELECTORAL AREA "C" PORCHER 54  
 NEW RURAL "C" 13  
 Kitkatla 327  
 Hartley Bay 185

**TOTAL 'Mainland'** 18,978

Village of Massett 1476

Village of Port Clements 483

**2593** ELECTORAL AREA "D"  
 Old Massett IR 632  
 Skidegate IR 469  
 Queen Charlotte 1079  
 Tlell, E. Coast 282  
 N. Beach, OTHER 131

**764** ELECTORAL AREA "E"  
 Sandspit Area 734  
 OTHER 30

**Ttl Queen Charlotte Is.** 5316

**TTL REGIONAL DISTRICT** 24,294

\* 1991 Census

Figure 1 :

## SKEENA-QUEEN CHARLOTTE REGIONAL DISTRICT

▲ Incorporated Communities

○ Other Communities

..... Electoral Area Boundaries



August, 1994

# INTRODUCTION

## **BACKGROUND:**

In 1989, the Province of British Columbia amended the Waste Management Act (Section 16 (2)) to require every Regional District to submit a Regional Waste Management Plan for approval by December 31, 1995. Each plan must show how a regional district will apply principles of reduction, reuse and recycling to reduce its solid waste and develop strategies to handle residual wastes. Together, the plans should help British Columbia achieve a 50% reduction in municipal solid waste disposal by the year 2000.

BC Environment issued guidelines to assist Regional Districts prepare their plans. These guidelines called for a three stage process, with each stage requiring approval from the Regional Manager of one of six Regional Offices of BC Environment. A description of the existing waste management system and identification of problems and options for waste reduction is the basis of Stage One. Stage Two requires a detailed evaluation of options considered in Stage One. Final adoption of the plan, including any requirements for implementing Bylaws, forms the basis for Stage Three.

## **REGIONAL DISTRICT PROCESS:**

### **Stage One:**

The Skeena-Queen Charlotte Regional District Board initiated the waste management planning process in December, 1990. It soon became clear that there were two distinct geographic regions (fig. 1) with separate waste management systems. As a result, two local advisory committees were established: one for the Queen Charlotte Islands; the other for the Mainland area of the Regional District. Besides the major population centre of the Prince Rupert - Port Edward area, the Mainland area also includes many isolated communities that have their own independent waste management systems. Most of these communities are on Indian Reserves so are technically outside the jurisdiction of the Regional District. They were participants in the planning process, however, thanks to the efforts of the North Coast Tribal Council.

The two committees developed terms of reference for completing Stage One and Two of the plan. Of the thirteen consulting firms invited to submit proposals, Associated Engineering was hired in September, 1991 to complete the task. Public meetings held on both the Islands and Mainland areas gave Associated an idea of some of the opportunities and problems the areas faced. Stage One was then developed over the next few months with a draft presented for public review in May, 1992.

Overall, the Stage One report demonstrated that it would be very difficult for the Regional District to achieve the 50% reduction goal by 2000. Reduction could come from education programs, economic incentives, composting and recycling programs. For the Islands area, the Stage One report showed that most of the then five landfills were reaching capacity and that the option of one or two landfills with associated transfer stations should be further investigated. A new landfill to serve Prince Rupert and Port Edward for as long as 75 years was opened in Prince Rupert in August, 1991 so residual management was not an issue on the Mainland. Options for recycling and composting systems were the main focus of Stage One for the Mainland area. A separate report was prepared for communities that were members of the North Coast Tribal Council. Stage One was approved by the Board in May and by BC Environment in November, 1992.



## **Stage Two:**

Work commenced on Stage Two in June, 1992 with attention focused on landfill and waste recovery options for the Islands and on recycling and composting options for the Mainland. An additional geotechnical investigation was required to test the feasibility of using the Port Clements landfill site as a regional site to serve all Islands communities. A draft report was ready for public presentations in June 1993.

The preliminary report showed that one regional site with satellite transfer stations was likely the most economical way to handle the Islands' solid waste. Backyard composting was recommended as the most cost effective way to reduce the amount of organic waste being landfilled for all areas in the Regional District. Other waste reduction policies advanced in the plan included economic disincentives including landfill tipping fees and household bag surcharges, education programs and procurement practices. A blue bag collection system was recommended as the best recycling option for the mainland, but no organized recycling system could be implemented for a reasonable cost on the Islands.

A pilot backyard composting program resulted in 600 composters being distributed prior to the public meetings in June, 1992. June also was the month that the Prince Rupert Recycling Society moved its depot operation to larger quarters. The Regional District provided the Society with an extra \$20,000 to cover their expenses for the final two months of 1993 when their Environmental Partners funding expired.

The June public meetings were poorly attended and the Board delayed adopting the plan until further work was done on recycling options. A subcommittee of the Board was set up to prepare additional alternatives for recycling systems that could be implemented starting in 1994. In the meantime, estimates were prepared to show Islands residents how their system would be funded.

The additional information was presented to the public at a meeting in Prince Rupert in October and three meetings on the Islands in November, 1993. All the meetings had better attendance than previously, with one meeting attracting 53 people in Queen Charlotte City. Most Islands residents at the meetings were opposed to paying for costs of the plan through property taxes. Mainland residents stated that their support for a recycling program was conditional on keeping costs to taxpayers at a "reasonable" and stable level.

The Board approved Stage Two at its November meeting. A permanent Committee was formed at the same meeting to implement Mainland policies of the plan (Appendix M-1, here). BC Environment did not give final approval to Stage Two until August, 1994 when a landfill filling plan had been completed for the Port Clements landfill site.

## **Stage Three:**

In order to maintain funding for the Prince Rupert Recycling Society, it was necessary to begin work on Stage Three immediately after the Board approved Stage Two. Interim funding was secured for the Society from a Regional District grant-in-aid until March, 1994. In the meantime, the Mainland Committee hired an Education Coordinator to implement some of the proposed reduction policies proposed in Stage Two and to do further research on recycling options possible within the limited grant-in-aid funding. It was determined that the only way the blue box collection service could be continued was to charge a fee for service. The Recycling Society rejected this option for the residential sector so the Mainland Committee recommended that the residential Blue Box service be replaced with a central drop-off facility by April 1.



In February, the Mainland Committee was given the opportunity to purchase the entire assets of the Williams Lake recycling operation which had similar problems securing long term funding. The Board approved \$40,000 for the purchase of this equipment and an offer was accepted. As a result, the Committee had the necessary equipment to both handle increased volumes of recyclables and to set up a drop-off depot system. A new manager, also from the Williams Lake operation, was hired to implement the system changes. The transition from a blue box to a drop-off system was completed on schedule in April and commercial user charges were introduced in June. These changes did not adversely affect volumes; in fact volumes have increased by 50% since the changeover, mostly from the commercial sector. User fees combined with substantially higher prices for materials have contributed to making the current recycling system viable with only the limited grant-in-aid public subsidy. Emphasis has been placed on targeting the commercial sector because it generates about 70% of the Mainland's waste. The Regional District took over operations of the system in June, 1994 in order to simplify its administration.

On the Islands, Gartner-Lee Engineering Ltd. was hired in March to complete a landfill filling plan for the proposed regional landfill in Port Clements. The Regional District also contracted local firms to provide ongoing environmental monitoring of creeks and groundwater in the vicinity of the landfill. Results of the studies showed that a landfill could be developed at the site and meet BC Environment regulations at a much lower cost than originally estimated. Nonetheless, the estimated costs are substantial and the monitoring required is onerous for the small Islands population base to support.

The need for opening the Port Clements site as a Regional Landfill by January, 1995 became even greater after MacMillan Bloedel announced it would no longer take municipal waste after June, 1994. This deadline was extended to the end of the year after the Regional District, through a local Advisory Planning Commission, QCCSLAPC, agreed to pay a gatekeeper at the Queen Charlotte landfill. A user charge was introduced to pay for this service. Similar user charges have been adopted at the Masset, Port Clements and Sandspit site and all islands sites now have gates and limited public hours. The Village of Masset proved that northern residents are quite willing to accept user pay volume charges when they introduced a bag tag surcharge in February, 1994. In the first six months of the program approximately 40% of residents used tags at least once per month.

Home composters were again offered for sale to Regional District residents. Islands residents purchased all 325 units supplied while Mainland residents purchased only 450 of the 575 units offered for sale. More than a third of Islands household now have composters and it appears that demand is still strong. Mainland demand for composters is much weaker, however and it may be difficult to achieve waste reduction goals for composting without additional incentives for waste reduction.

Disposal of auto hulks and white goods has always been a problem in the Regional District. The proportion of these materials on the Queen Charlotte Islands is probably substantially higher than 5% of the waste stream (stage 1 estimate) so a proposed recycling system should increase the diversion rate. Some changes were made to Stage Three to facilitate handling of these and other problem wastes.

A draft of Stage Three policies was prepared in June for Committee review. Policies in the plan are derived from policies adopted by the Board in Stage Two and other policies recommended by the advisory committees. This draft was presented to the Board in August and revised after agency and public review in September.





### Stage Three Outline:

The complete Stage Three document is actually two sub-regional plans. The plan will be implemented by the Regional Board but will be administered by two separate Board Committees. For this reason the plan is organized in a way to allow each sub-regional plan to be independently numbered so that they can be used as separate documents. The only sections common to both are this introduction and a section outlining broad regional and provincial policies that may be required. Any policies or appendices that apply only to Islands areas are given an "I" prefix and Mainland only policies are given a "M" prefix. Bylaws and contracts will be developed from guidelines found in the appendices to this plan.

Some policies may differ from Stage Two recommendations because of changed circumstances or information since the Board's initial approval. Stage Three should be treated in a similar manner- at times it may be necessary to alter specific policies in order to meet plan goals and objectives.

Plan **goals** represent general targets for various components of the plan. **Objectives** are more specific to sets of strategies required to achieve the goals. To achieve the objective and goals, specific **policies** describe actions required.

### Waste Reduction And Program Costs:

Most plan policies and programs will be implemented in the first year after adoption with associated costs paid on an annual basis in most cases. A smaller portion of the costs will be paid over a longer period as either debt or one time program phasing costs. Some programs are already in place (ie Mainland recycling) so there will be no increases in these costs when the plan is adopted. The Islands operating costs replace existing costs incurred by other jurisdictions. Some estimates are from Stage 2 and reports done during the Stage 3 process.

#### Mainland

<u>Program</u>	<u>Expected Reduction</u>	<u>R.D. Cost</u>
Home Composting	6%	\$ 66,000 Total
Reduction incentives, education	10%	\$ 30,000 per year
Recycling	<u>16%</u>	\$100,000 per year
Overall Reduction	32%	

#### Islands

<u>Program</u>	<u>Expected Reduction</u>	<u>R.D. Cost</u>
Home Composting	10%	\$17,000 Total
Recycling (Includes Autohulks, White goods)	6%	from user fee + \$30,000 to \$120,000 Capital
Purchase Landfill		\$ 41,180 Actual
Landfill Construction		\$160,000 initial
Transfer Stations & Bins		\$ 90,000 initial
System operating cost		\$460,000 per year
Incentives, Education	<u>10%</u>	\$ 30,000 per year
	26%	

If waste reduction goals are met, per capita waste generation will decline from 690 kg. to 470 kg. per year. Overall, the quantity of waste will decline from 16,700 tonnes in 1991 to 11,200 tonnes in the year 2000; a decline of over 5500 tonnes per year.

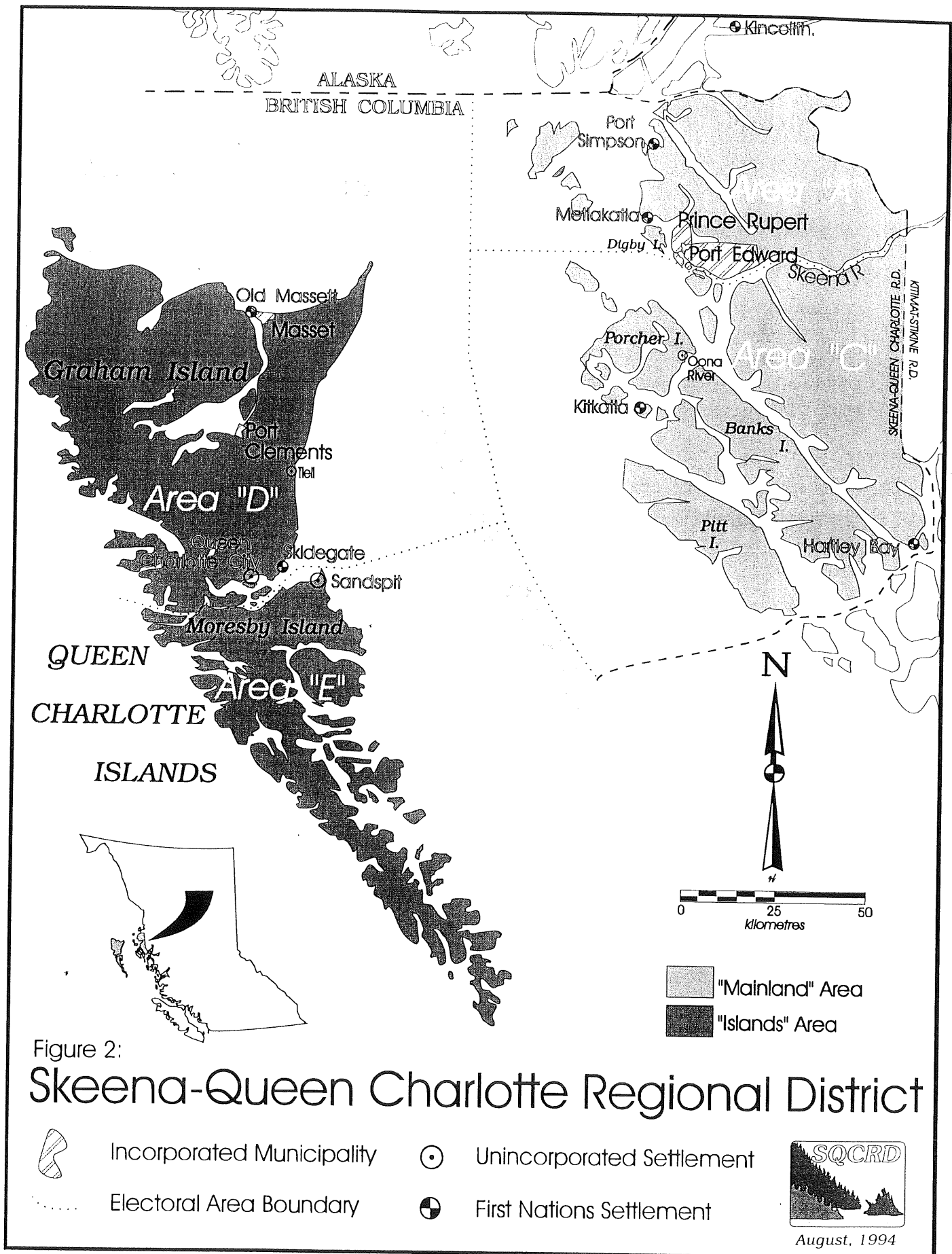




# **SECTION ONE**

## **REGIONAL & PROVINCIAL POLICIES**





## REGIONAL AND PROVINCIAL INITIATIVES

*Some policies apply to the entire Regional District and may involve participation from senior levels of government. Senior government support is required in order for the Regional District to approach the provincially mandated 50% reduction goal by 2000.*

*These policies apply to both the Mainland and the Islands plan areas.*

**Goal:** To cooperate with all jurisdictions to ensure solid waste is dealt with in a cost effective manner that minimizes environmental impact.

**Objective 1:**

To ensure all government agencies within the Regional District are aware of the contents of this plan.

**Policy: 1.1 Local Plan Referral**

Copies of this plan and any amendments are to be distributed to all local governments, First Nations governments, and federal and provincial agencies with offices in the Regional District.

**Policy: 1.2 Consultation**

Any initiatives proposed in this plan that require cooperation between the Regional District and other agencies will be implemented after consultation with agency involved.

**Policy: 1.3 Recycling**

The Mainland Recycling Service will accept, without charge, materials it designates as recyclable from all areas within the Regional District and Kincolith, if delivered to the depot.

**Objective: 2:**

To ensure that savings can be achieved by scale of economies offered by cooperation with adjacent regions.

**Policy: 2.1 Regional Plan Referral**

Copies of this plan and any amendments are to be distributed to the Kitimat-Stikine and to the Bulkley-Nechako Regional Districts.

**Policy: 2.2 Joint Marketing & Coordination of Recyclables**

The Regional District will explore opportunities for developing users for recyclable products within Northwest British Columbia, and for developing joint strategies for marketing and transporting recyclables.



## *Regional Policies Con't*

### **Objective 3: Legislation**

To ensure that senior government agencies support waste management legislation they sponsor.

#### **Policy: 3.1 Enforcement**

Encourage B.C. Environment to enforce its regulations by:

- i) stationing an environmental protection officer within the Regional District; or
- ii) providing funds for the Regional District to monitor compliance of regulations on behalf of B.C. Environment.

#### **Policy: 3.2 Product Stewardship**

Encourage B.C. Environment and Federal Agencies to introduce and retain legislation that will encourage waste reduction and support cradle-to-grave product stewardship.

#### **Policy: 3.3 Recycling Funding**

Urge the B.C. Government to adopt Beverage Container and other packaging legislation that will provide a source of funding for waste reduction initiatives.

#### **Policy: 3.4 Transportation Subsidies**

Ensure that transportation subsidies are provided to assist with the cost of transportation of Recyclables, special and hazardous wastes.

#### **Policy: 3.5 Reduction Incentives**

Request that B.C. Environment recognize the efforts of jurisdictions that are attempting to meet provincial waste reduction goals by setting performance criteria when distributing limited funds available from grant programs.

#### **Policy: 3.6 Senior Government Policies**

Request that no new Senior Government Waste Management legislation be initiated unless it is fully funded by that sponsoring agency, unless that agency can provide evidence to show that any costs to local government will be offset by savings in other areas.

#### **Policy: 3.7 Illegal Offshore Dumping**

Request that federal agencies monitor incidence of illegal offshore disposal of waste and facilitate and encourage foreign vessels to dispose of their refuse at appropriate on shore facilities.



## **SECTION TWO**

# **MAINLAND WASTE MANAGEMENT PLAN**



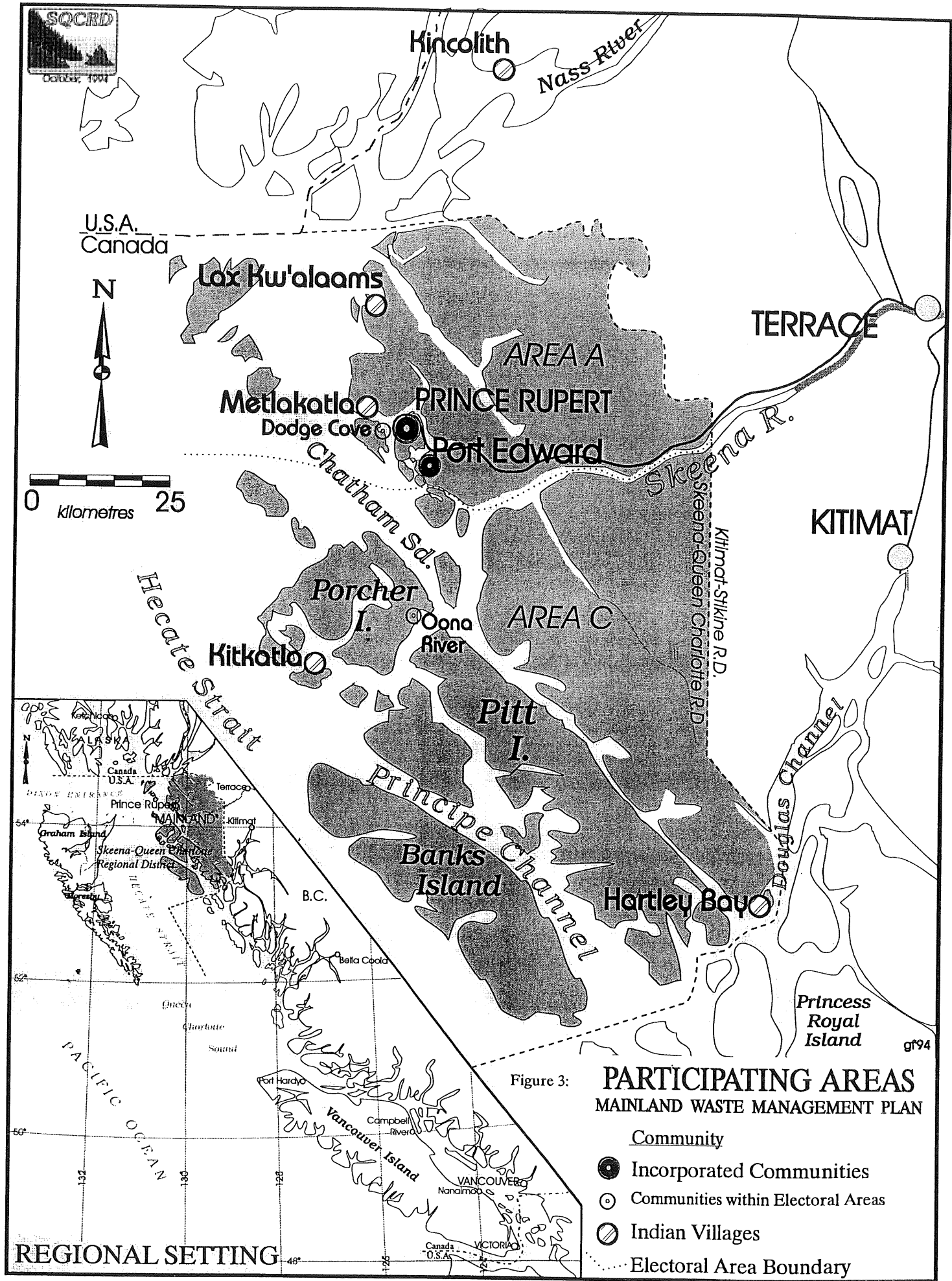


Figure 3:

# **PARTICIPATING AREAS** **MAINLAND WASTE MANAGEMENT PLAN**

- Community**
- Incorporated Communities
  - Communities within Electoral Areas
  - Indian Villages
  - ..... Electoral Area Boundary



# MAINLAND WASTE MANAGEMENT PLAN

## STAGE 3 IMPLEMENTATION

**Goal:** The residents of the Skeena-Queen Charlotte Regional District will strive to manage their solid waste in a way that will have a minimal impact on the environment.

To achieve this goal, two sets of strategies will be used:

- A) Residual Management policies will guide solid waste handling practices; and
- B) Waste Reduction Strategies will minimize the volume of solid waste entering the environment.

Before these strategies can be implemented it will be necessary to coordinate activities of various jurisdictions responsible for solid waste management within the Mainland area of the Regional District (figure 3).

### **M1.0 ADMINISTRATION**

**Goal:** To ensure that local agencies responsible for solid waste management coordinate their activities to encourage waste reduction and reduce handling and disposal costs.

#### **Objective M1.1 Coordination**

Coordinate policies of this plan with municipal and other local groups with an interest in solid waste .

#### **Policy M1.1.1 Service Area**

A local solid waste reduction service area be established to include Electoral Area A, Electoral Area C, District of Port Edward and the City of Prince Rupert (figure 3).

#### **Policy M1.1.3 Mainland Committee**

A permanent Waste Management Committee (MSWAC) be established with representation from Electoral Area A, Electoral Area C, the City of Prince Rupert, District of Port Edward, and a representative from an environmental organization, to be responsible for administering the Mainland Solid Waste programs (Appendix M1).

#### **Policy M1.1.4 Programs**

Recycling, waste reduction education and composting programs be administered by the Mainland Solid Waste Management Advisory Committee (Appendix M2), which will in turn report to the Skeena-Queen Charlotte Regional District Board (the Board).

#### **Policy M1.1.5 First Nations Coordination**

First nations organizations including Indian Villages and Tribal Councils will be invited to participate in various regional waste reduction initiatives including backyard composting.



## REDUCTION STRATEGIES- Mainland

*Many of the price based reduction policies are also described in other sections. They will be cross referenced accordingly. Many of these policies will require close cooperation between local governments and the Regional District.*

**Goal:** To reduce the amount of solid waste being landfilled.

### M2.0 REDUCTION

#### **Objective M2.1 Incentives**

To establish economic and regulatory incentives to encourage waste reduction.

##### **Policy: M2.1.1 Bag Limits**

A 2 bag per week limit be established for Prince Rupert and Port Edward (defined in Appendix 3). This limit shall be reviewed annually by MSWAC.

##### **Policy: M2.1.2 Fee for Extra Bags**

Additional volumes be accepted when a pre-paid tag is attached. Tags will be circulated in a convenient manner determined by the City of Prince Rupert and the District of Port Edward.

##### **Policy: M2.1.3 Use of Tag Fees**

Encourage the City of Prince Rupert and the District of Port Edward to use the tag fees in ways that will encourage waste reduction, provide relief to special groups requiring assistance for their waste disposal and recycling, disposal or for clean-up campaigns.

##### **Policy: M2.1.4 Tipping Fees**

Volume based tipping fees described in Appendix M4 be collected at the landfill.

##### **Policy: M2.1.5 Problem Wastes**

Fees will be collected for tires, white goods and other problem wastes specified in Appendix 4. Fees should be set high enough to recover costs associated with processing these materials.

##### **Policy: M2.1.6 Special Waste List Review**

MSWAC shall review Appendix 4 annually and recommend changes to the Regional District Board and its member municipalities.

#### **Objective M2.2 Restrictions**

To discourage landfilling materials that could be utilized elsewhere.

##### **Policy: M2.2.1 Material Bans & Surcharges**

Once adequate recycling or reuse options exist, MSWAC will consider applying material bans and surcharges for certain items or materials of the waste stream identified in Appendix M4.



### **M3.0 EDUCATION**

#### **Objective M3.1**

To provide information to the public and users of the Mainland system that will encourage solid waste reduction, reuse and recycling and proper handling of solid waste.

#### **Policy: M3.1.1            Education**

A Mainland Waste Reduction Coordinator be contracted to organize regular solid waste and recycling waste reduction education programs for schools, local government and other interested groups.

#### **Policy: M3.1.2**

All Mainland areas participating in the waste reduction service area identified in Policy M1.1.1 will participate in the funding of education program. Funding will be limited by bylaw as established in appendix M2.

#### **Policy: M3.1.3            Provincial Support**

Apply to B.C. Environment for funds to assist support in providing for waste reduction education.

### **M4.0 COMPOSTING**

#### **Objective M4.1**

Encourage composting as a method for waste reduction.

#### **Policy: M4.1.1            Backyard Composters**

Backyard composting will be encouraged and subsidized from time to time with funds provided by the Provincial Government and from a levy assessed from property taxes from the Mainland area.

#### **Policy: M4.1.2            Cooperation with other Areas**

To reduce shipping costs and increase the frequency of backyard composter distribution, other jurisdictions be invited to participate in sharing shipments of composters. These include all Indian villages within the Mainland area (and Kincolith), the Queen Charlotte Islands and , if necessary, communities within the Kitimat-Stikine Regional District.

#### **Policy: M4.1.3            Other Composting Initiatives**

MSWAC will encourage initiatives for commercial and backyard composting operations by having the education coordinator provide information on composter design and operation and any existing operations that will accept compostable materials.



## **M5.0 RECYCLING**

**Objective: M5.1 Recycling**  
Support recycling as a viable method to reduce solid waste.

### **Policy: M5.1.1 Recycling Participation**

All Mainland areas participating in the waste reduction service area identified in Policy M1.1.1 will participate in the funding of a Mainland Regional Recycling service. Funding will be limited by bylaw as established in Appendix M2.

### **Policy: M5.1.2 Recycling Service**

Recycling services be provided to residents in the Mainland area according to: 1) equitable access to recycling services for all area residents ; 2) materials that will provide the greatest waste reduction; 3) materials that would cause adverse environmental impacts if disposed of by alternate methods; all from the funding provided in policy M5.1.1. Current service specifications and materials accepted are specified in Appendix M5.

### **Policy: M5.1.3 Additional Services**

Additional services that facilitate recycling or reuse may be established from time to time on a fee for service basis.

### **Policy: M5.1.4 Envirocenter**

Consider establishing a convenient facility that will combine local recycling services with provincially regulated recycling and reuse programs such as paint recycling and beverage container returns. Extra costs associated with the provincial programs would be recovered from associated revenues.

### **Policy: M5.1.5 Recycling Staff**

Staff be hired to provide Recycling Services specified in Appendix 5. An operations manager will be responsible for the day to day operations of the service, including hiring any other staff required. The Manager will report to MSWAC and the Regional District Administrator.

### **Policy: M5.1.6 Review of Service**

The Operations Manager will continuously monitor the performance of the Recycling Service and market conditions affecting it, and will recommend changes to MSWAC for approval. MSWAC will recommend the Regional District Board ratify any changes to services outlined in Appendix M5.



**Policy: M5.1.7      Recycling Capital Expenditures**

A Recycling Capital Reserve be established. An amount, set in the annual budget, will be established for transfer into the capital reserve to be used to replace existing equipment and purchase new equipment according to the Regional District's five year capital expenditure program. Any surplus funds resulting from operations will be deposited in this fund.

**Policy: M5.2.1      Problem Waste Recycling**

Wastes requiring special handling such as white goods (fridges, stoves etc.), tires, batteries, auto hulks and other materials described in Appendix 4 will be considered for recycling by 1) private enterprise with coordination provided by the Regional District or 2) by the Regional Recycling service on a fee for service basis.

**Objective: M5.2 Problem  
Wastes Recycling**

To facilitate the recycling of hard to handle wastes.

**Policy: M5.2.2      Problem Waste Coordinator**

A Regional District employee will be designated as Problem Waste Coordinator. He/She will facilitate the proper disposal of problem wastes by coordinating existing public and private disposal methods.

**Policy: M5.2.3      Special Skills Required**

If available and affordable, a member of the Recycling service staff will be given appropriate training to handle any problem wastes included in Appendix M4. This may include skills required to remove ozone depleting substances from refrigerators, air-conditioning units and freezers. Alternatively handling of problem wastes may be contracted to a skilled operator.

**Policy: M5.2.4      White Goods Recycling**

The Regional District (all areas participating) consider purchasing a portable white goods/autohulk compactor. Once sufficient materials (acceptable materials listed in Appendix M4) have been accumulated at any landfill within the Regional District, the portable compactor and skilled operator will be available to process and arrange to recycle these materials. Any ozone depleting substances will be removed prior to compaction. The cost of this service is to be recovered from user charges described in policies and from the sale of scrap metal.

**Policy: M5.2.5      Salvage Rights**

Request the City of Prince Rupert grant exclusive salvage rights to a contractor to recycle any additional materials deposited in the landfill. The successful contractor would pay the City an annual fee, document and report the weight of material diverted and operate according to conditions established by the City.

## **RESIDUAL MANAGEMENT STRATEGIES- Mainland**

*Currently the main component of the existing residuals management system is a landfill, owned and operated by the City of Prince Rupert. This landfill serves Prince Rupert, Port Edward and a portion of the surrounding rural areas. Other landfills and incinerators serve various isolated Indian villages. Although these villages are administered independently of the Regional District, many of the recommendations here could be adopted for their use.*

### **M6.0 LANDFILLS**

**Goal:** To dispose of solid waste using methods that will cause minimal adverse impact on the receiving environment.

**Objective M6.1:      Landfill**

Encourage all landfill operators to adopt landfill practices that will extend the life and reduce the operating costs of their landfills.

**Policy: M6.1.1      Landfill Operation**

Local authorities to continue to operate landfill sites and other waste disposal facilities in accordance with BC Environment standards.

**Policy: M6.1.2      Daily Cover**

Consider using geotextile tarps as an alternative to fill for use to meet daily cover requirements.

**Policy: M6.1.3      Recyclables Storage**

Provide areas at landfill facilities for temporary storage of bulky recyclables such as fridges, stoves, water heaters etc. (white goods).

**Policy: M6.1.4      White Goods Compactor**

Provide space at the Prince Rupert Landfill or an other site for a white goods autohulk compactor.

**Policy: M6.1.5      Autohulks**

Temporary storage areas should be provided for autohulks at all landfills except at Prince Rupert. Consideration will be given to establishing an autohulk marshalling yard in the Prince Rupert - Port Edward area.

**Policy: M6.1.6      Wood and Demolition Wastes**

Encourage the City of Prince Rupert to purchase a tub grinder that could process woodwaste and demolition waste to be suitable for cover material.

**Policy: M6.1.7      Tires**

Investigate the possibility of utilizing a tub grinder for processing tires. If feasible, establish a site for tire storage and a trailer container at the Prince Rupert landfill or another site.



## *Landfills-Continued*

### **Objective: M6.2      Closure**

To ensure landfills or portions of landfills are closed using methods that will minimize environmental impacts.

### **Objective: M6.3      Finance**

Provide a fair method to finance the capital and operating costs of the landfill over its entire life cycle.

### **Objective 6.4:      Permit**

Ensure that users of Landfill facilities have responsibility for meeting conditions outlined in the waste management permit.

## **M7.0 COLLECTION SERVICE**

### **M7.1 Objective:**

Ensure that residents of Prince Rupert and Port Edward continue to be served by a regular garbage collection service.

### **Policy: M6.2.1      Landfill Closure**

In accordance with Ministry of Environment solid waste disposal guidelines, sites are to be closed with the assistance from B.C. Environment.

### **Policy: M6.3.1      Capital Costs- Prince Rupert**

Pay for the initial capital costs of the Prince Rupert Landfill by applying a portion of tipping fees according to a formula derived from the expected capacity of the landfill as outlined in Appendix M4. Establish a reserve fund to which funds will accumulate pay for landfill capital costs.

### **Policy: M6.3.2      Operating Costs**

Annual operating costs be funded by user fees (tipping fees) as established by the City of Prince Rupert after consideration of transfers to the capital reserve fund described in Appendix M4.

### **Policy: M6.3.3      Closure Costs**

Apply a portion of the tipping fees to pay for expected closure costs according to a formula derived from the expected capacity of the landfill as outlined in Appendix M4. All such funds are to be directed to the capital reserve fund described in Policy M6.3.1.

### **Policy: M6.3.4      Review of Capital Reserve Transfers**

Review transfers to the Capital Reserve fund listed in Appendix M4 whenever: 1) the estimated life of the landfill is changed because of revised operating practices; 2) financing charges are revised or; 3) closure requirements are changed resulting in the need for revised closure costs.

### **Policy: M6.4.1      Transfer of Permit**

Consider a transfer of the waste management operation permit for the Prince Rupert landfill facility to the Skeena-Queen Charlotte Regional District.

### **Policy: M7.1.1      Collection Coordination**

Similar standards be established for collection services in Prince Rupert and Port Edward.

### **Policy: M7.1.2      Collection Administration**

The City of Prince Rupert and the District of Port Edward continue to administer their own collection services.



Figure 4: **IMPLEMENTATION SCHEDULE**  
**STAGE 3: MAINLAND SOLID WASTE MANAGEMENT PLAN**

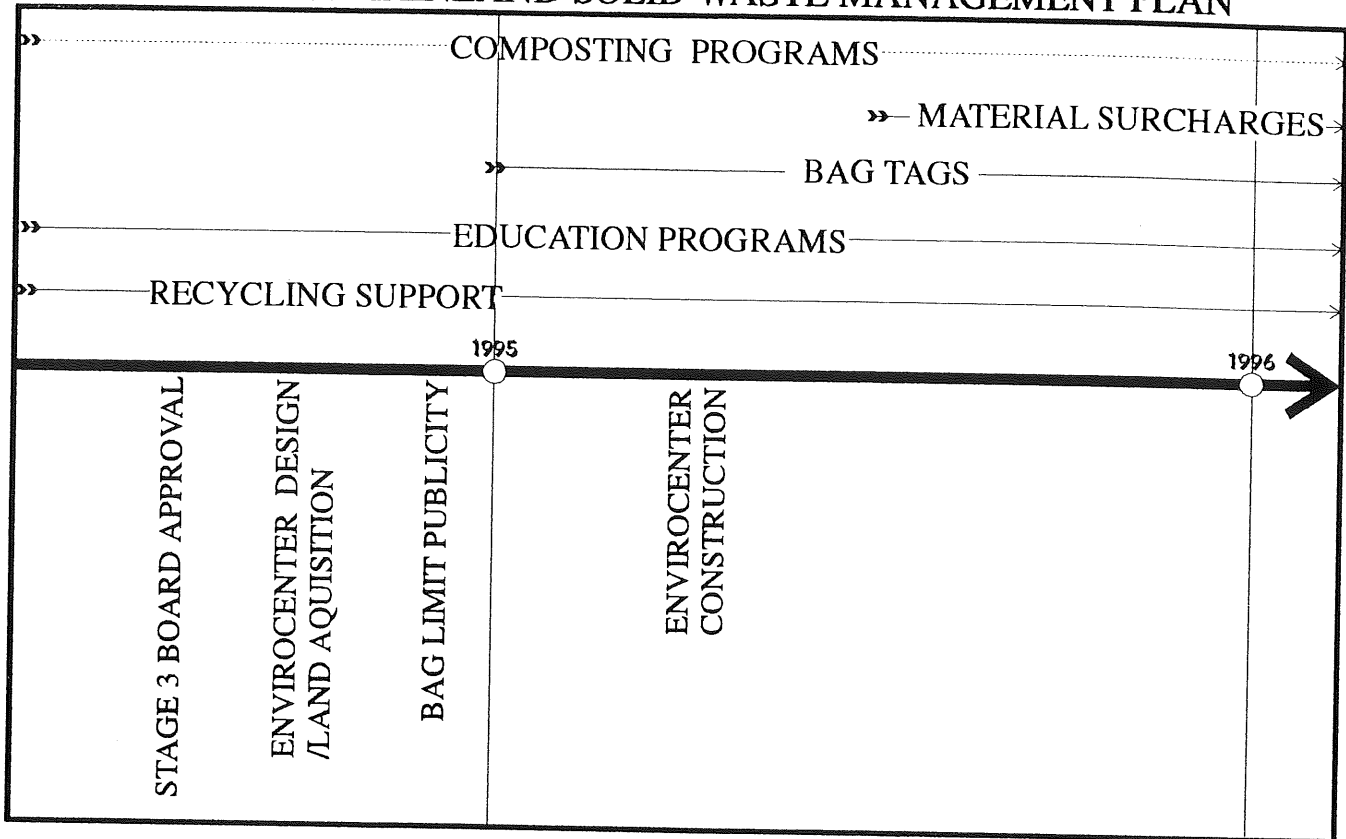


Figure 5: **RESPONSIBILITY FOR PROGRAMS**

PROGRAM RESPONSIBLE PARTY	POLICY REVIEWS	ANNUAL BUDGETS	RECYCLING	EDUCATION PROGRAMS	MONITORING ILLEGAL DUMPING	RESIDENTIAL COLLECTION	COMMERCIAL COLLECTION	BILLING & COLLECTION	LANDFILL	BAG TAG SALES
RD BOARD	✓	✓								
MSWAC	✓	✓	✓	✓	✓					
EDUCATION COORDINATOR				✓	✓					
RECYCLING SERVICE			✓				✓	✓		
DISTRICT OF PORT EDWARD	✓	✓			✓	✓	✓	✓		✓
CITY OF PRINCE RUPERT	✓	✓			✓	✓	✓	✓	✓	✓
INDEPENDANT OPERATORS*						✓	✓			

\* private operators may provide residential and commercial refuse and recycling collection services



Objective: M7.2 **Reductive Incentive**  
Encourage continued waste reduction by passing any savings resulting from waste reduction to users.

Policy: M7.2.1 **User Fees**  
Include tipping fee costs when calculating collection user charges.

Policy: M7.2.2 **Waste Reduction Savings**  
Set user charges according to actual costs for the service - if costs decline as a result of waste reduction these savings be passed along to users.

## **M8.0 IMPLEMENTATION**

Objective: M8.1 **Implementation**  
Implement this plan in a way that will minimize inconvenience to residents.

Policy: M8.1.1 **Schedule**  
Implement the plan according to the Schedule presented in Figure 4.

Policy M8.1.2 **Responsibility**  
Responsibility for implementing various components of the plan will be set according to Figure 5.

Objective: M8.2 **Illegal Dumping**  
Ensure that possible negative reactions to some plan policies are addressed during implementation.

Policy: M8.2.1 **Public Reporting**  
Encourage the public to report any incidents of illegal dumping to the appropriate jurisdiction. If incident cannot be investigated in a timely manner by the appropriate jurisdiction, the Education Coordinator will record the incident and forward a detailed report to the appropriate Authority.

Policy: M8.2.2 **Anti - Dumping Bylaws**  
Encourage the City of Prince Rupert and the District of Port Edward to harmonize their illegal dumping bylaws and make illegal dumping a ticketable offense. If illegal dumping becomes a problem on Digby Island or any other Regional District administered area the Regional Board consider adopting a similar bylaw.





























Policy: M8.2.3 **Education to Prevent Illegal Dumping**  
The Education Coordinator will work in cooperation with the Prince Rupert Civic Pride manager to publicize incidents of illegal dumping together with the public cost and fines that could be expected.



Figure 6:

# FUNDING FOR PLAN PROGRAMS

## STAGE 3: MAINLAND SOLID WASTE MANAGEMENT PLAN

<div>PLAN ITEM</div> <div>FUNDING SOURCE</div>	PROPERTY TAXES	SERVICE CHARGE	TIPPING FEES	HANDLING LEVIES	MATERIAL SALES	SENIOR GOV'T GRANTS	BAG TAGS
LANDFILL MAINTENANCE							
CLOSURE RESERVE							
SPECIAL WASTE DISPOSAL							
LOCAL COLLECTION							
RECYCLING CAPITAL COST			 *				
RECYCLING OPERATING							
COMPOSTING PROGRAMS			 *				
EDUCATION PROGRAMS							
COORDINATOR CONTRACT							
ADMINISTRATION							

\* for facilities located at the landfill

## *Implementation-Continued*

### **Objective M8.3 Public Involvement**

Ensure that the public and system users are participants in any modifications to this plan.

### **Policy: M8.2.4 Funding Assistance**

MSWAC will apply for funding to B.C. Environment or any other jurisdiction that we assist in the enforcement of their legislation.

### **Policy: M8.3.1 Public Comments**

Regional District staff will keep a record of all suggestions and comments from the public and will ensure that MSWAC is kept informed of this information.

### **Policy: M8.3.2 MSWAC Meetings**

MSWAC will meet monthly, to review the operations of the Waste Management System and to consider comments from the public. Quarterly meetings will be open to the public.

### **Policy M8.3.3 Special Meetings**

Special public meetings will be held to consider major changes to this plan.

### **Objective M8.4 Disputes**

Provide a framework to resolve disputes arising from implementation of the plan.

### **Policy M8.4.1 Disputes**

When disputes arise between any of participating communities, the Regional District and /or contractors hired to implement the system, it should be resolved by: 1) ISWAC, which may refer the dispute to 2) participating Regional District directors and any delegates they may choose to invite, who may refer the dispute to 3) the entire Regional District Board.

### **Objective: 8.5 Funding**

Ensure that the entire system is funded to accomplish the goals of this plan.

### **Policy: 8.5 Funding Sources**

Required funds are to be raised from (figure 6):

- 1) Property taxes ;
- 2) User charges from:
  - a) Quarterly unit fees
  - b) Volume based tipping fees
  - c) Bag tags; and
  - d) Special handling levies
- 3) Senior Government grants.

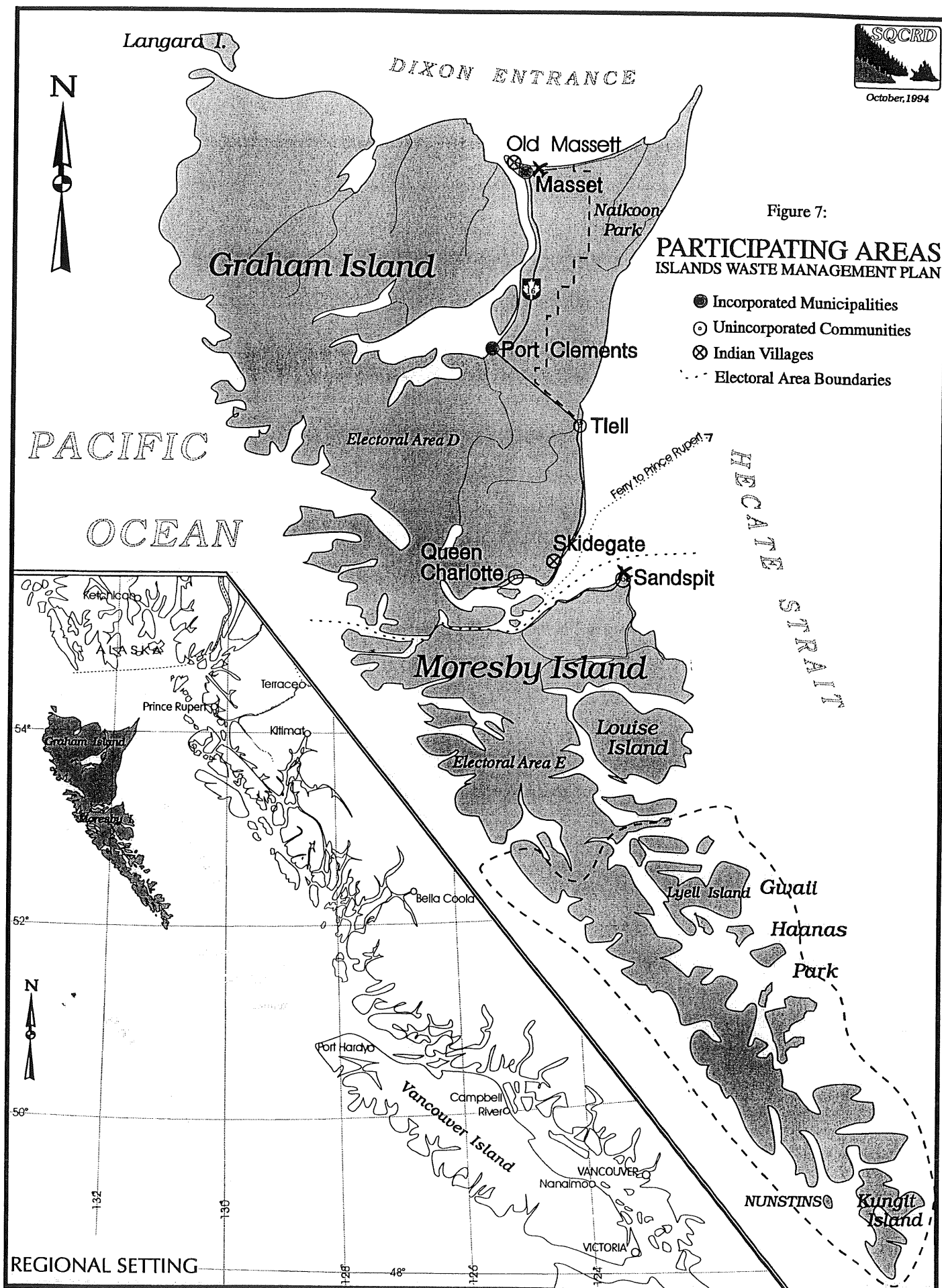




## **SECTION THREE**

# **ISLANDS WASTE MANAGEMENT PLAN**





# ISLANDS WASTE MANAGEMENT PLAN

## STAGE 3 IMPLEMENTATION

**Goal:** The residents of Queen Charlotte Islands/Haida Gwaii ("Islands") will strive to manage their solid waste in a way that will have a minimal impact on the environment.

To achieve this goal, two sets of strategies will be used:

- A) Residual Management policies will guide solid waste handling practices; and
- B) Waste Reduction Strategies will minimize the volume of solid waste entering landfill sites.

Before these strategies can be implemented, it will be necessary for Islands residents to take responsibility for their solid waste:

### **II.0 ADMINISTRATION**

**Goal:** To ensure that responsibility for solid waste on the Islands assumed by Islands residents.

#### **Objective:II.1**

All Islands residents have a personal and collective responsibility for their own solid waste.

#### **Policy:II.1.1                      Service Area**

A local solid waste service area be established to include Electoral Area D, Electoral Area E, Village of Massett and the Village of Port Clements (Figure 7).

#### **Policy:II.1.2                      Service Agreements**

Establish service agreements with the Old Massett Band Council and the Skidegate Band Council for solid waste collection and disposal.

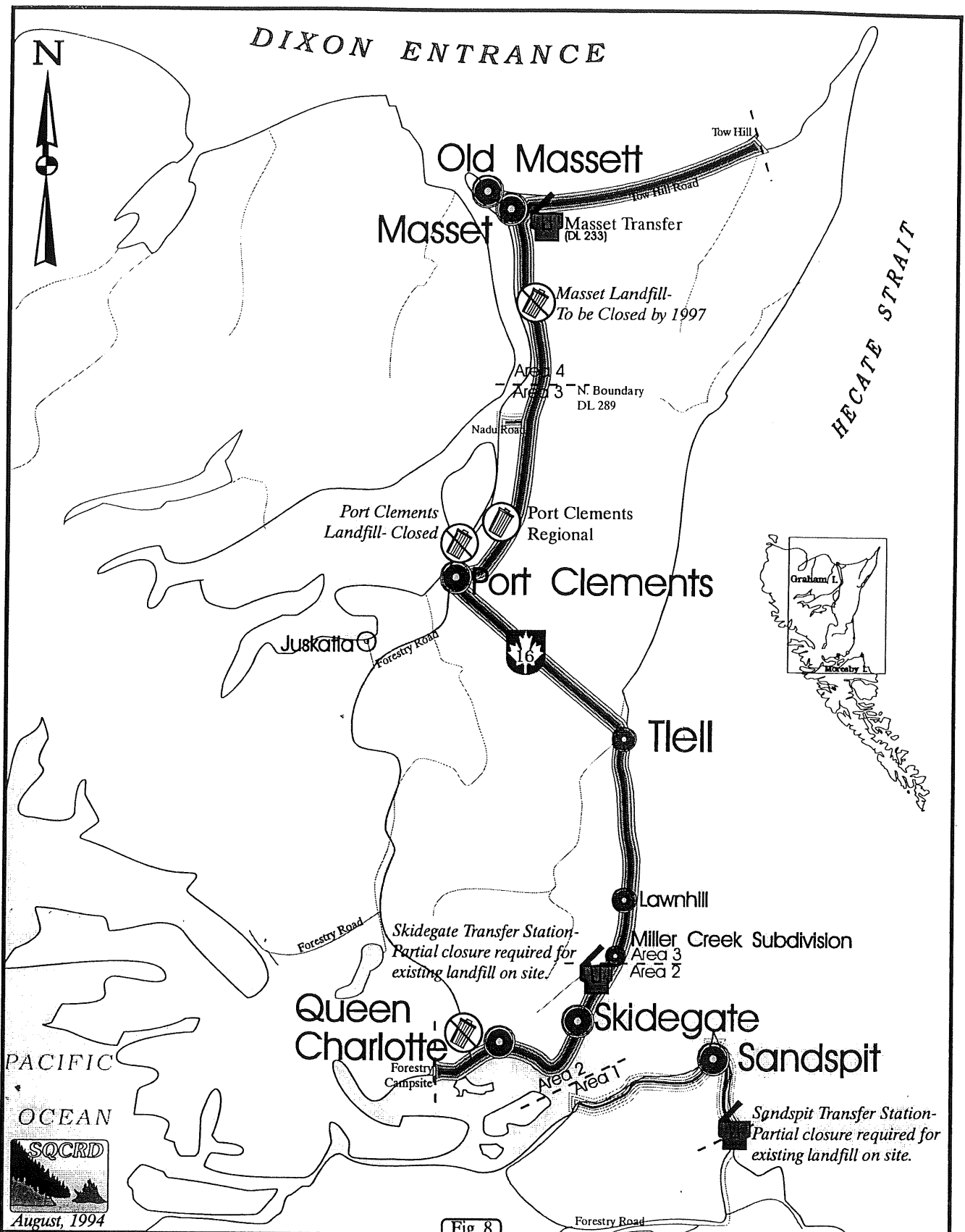
#### **Policy:II.1.3                      Islands Committee**

A permanent Waste Management Islands Committee be established with representation from Electoral Area D, Electoral Area E, the Village of Massett, Village of Port Clements, Old Massett, Skidegate and representatives from environmental organizations, to be responsible for administering the Islands Solid Waste System (Appendix I-1).

#### **Policy:II.1.4                      Contract Administration**

All contracts pertaining to the operation of the Islands Sub-Regional Waste Management System be administered by the Islands Solid Waste Management Advisory Committee (ISWAC), which will in turn report to the Skeena-Queen Charlotte Regional District Board (the Board).





## SERVICE AREAS & FACILITIES

### ISLANDS WASTE MANAGEMENT PLAN

● Communities with full collection service

■ Transfer Station

⊗ Regional Landfill

⊗ Closed Landfills

⤴ Service Area (along designated roads)

--- Service Area Boundary

0 25 kilometres



## ISLANDS RESIDUAL MANAGEMENT SYSTEM

*The existing Islands waste management system will be replaced with the new system detailed in this plan. This section details the policies required to establish this system.*

### I2.0 LANDFILLS

**Goal:** To dispose of solid waste using methods that will cause minimal adverse impact on the receiving environment.

#### **Objective:I2.1 Landfill**

Develop and operate a landfill near Port Clements (Fig. 8) serving all Islands communities that will meet B.C. Environment's landfill criteria in a cost effective manner.

#### **Policy:I2.1.1 Landfill Construction**

Develop the landfill site according to the "Port Clements Sub-Regional Landfill and Operations Plan" (Landfill Plan), Appendix I-2 of this plan.

#### **Policy:I2.1.2 Landfill Operation**

Operate the landfill site according to the Landfill Plan.

#### **Policy:I2.1.3 Landfill Construction & Operation Contract**

Tender the construction and the operation of the landfill to private contractors and include a renewal clause for the landfill operation based on performance criteria specified in the Landfill Plan.

#### **Policy: I2.1.4 Landfill Site**

Purchase the existing Port Clements Landfill from the Village of Port Clements and re-imburse them for their capital items that will be used for the regional site.

#### **Policy:I2.1.5 Environmental Monitoring**

Establish environmental monitoring contract(s) to measure water quality, stream flow and ground water levels as set out in the Landfill Plan.

#### **Policy:I 2.16 Review**

Review the data from the Environmental Monitoring program and determine whether amendments are required to Appendix I-2.

#### **Objective: I2.2 Closure**

To close existing landfill sites to prevent further adverse environmental impacts.

#### **Policy:I2.2.1 Landfill Closures**

In accordance with Ministry of Environment solid waste disposal guidelines existing sites are to be closed with the assistance of B.C. Environment.

#### **Policy: I2.2.2 Transfer of Sites and Permits**

Prior to the final closure plans have been prepared Skidegate and Sandspit Landfills, the Regional District will negotiate with the Skidegate Band Council, Hecate Junk-it, and the Ministry of Environment for a transfer of all or part of the permits for those sites.



**Policy: I2.2.3**

Negotiate with the Ministry of Environment for an amendment of the transfer site permits for the following uses:

- 1) Transfer sites for temporary storage of municipal waste
- 2) Septage disposal (Sandspit only)
- 3) Burning sites for some categories of demolition waste
- 4) Other demolition wastes that could be used on site as fill or cover material.
- 5) Temporary storage areas for autohulks, tires and white goods

**Objective: I2.3 Finance**

Provide a fair method to finance the capital and operating costs of the landfill over its entire life cycle.

**Policy: I2.3.1**

**Capital Costs**

Requisition money from the General Assessment from Assessment Area 750 (Area "D" and "E"), Port Clements and Masset to pay for the initial capital costs for the landfill and for a Capital Reserve Fund to pay for closure. This amount is to be reduced by funds collected from Old Massett and Skidegate for their share of the costs, which will be apportioned according to the total Islands population utilizing to the most recent census data.

**Policy: I2.3.2**

**Operating Costs**

Annual operating costs be funded by user fees as listed in Appendix I3. If the user fees are insufficient in any given year, the difference shall be temporarily funded from the capital reserve fund and be replenished the following year from the source identified in Policy I2.3.1.

**Policy: I2.3.3**

**Review of User Fees**

User fee levels shall be reviewed annually by ISWAC which shall recommend any changes to the Board.

**Policy: I2.3.4**

**Closure Fund Review**

The annual level of funding to the closure capital reserve shall be reviewed every 5 years or whenever there are operational changes proposed by ISWAC or B.C. Environment.



### **I-3.0 COLLECTION SERVICE**

#### **I3.1 Objective: Service**

Provide a refuse collection service to all Islands residents accessible by road.

#### **Policy: I3.1.1 Collection List**

All occupied residences and active commercial establishments (collection units) be enumerated and entered on a list that will be updated on an ongoing basis by the Islands Waste Coordinator.

#### **Policy I3.1.2 Other Uses**

Invite B.C. Parks and the Ministry of Highways participate in the regular collection service for their roadside refuse containers.

#### **Policy I3.1.3 Weekly Service**

All collection units enumerated will be provided with a weekly refuse collection service.

#### **Policy: I3.1.4 Service Areas**

Local refuse collection systems be established for the following service areas (Fig 8):

- 1) Moresby Island
- 2) Queen Charlotte City/Skidegate including all areas south of Chinukundl Creek
- 3) Port Clements/Tlell including all areas south of including Nadu Road to north of Chinukundl Creek
- 4) Masset/Old Massett including areas north of Nadu Road and Tow Hill Road.

#### **Policy: I3.1.5 Opting Out**

Skidegate, Old Massett and incorporated Municipalities may opt out of the collection system prior to collection contracts being awarded. Incorporated Municipalities may only opt out if:

- 1) They provide an alternative compulsory collection service to all their residents;
- 2) They have the same level of fee surcharges for additional volumes of garbage as stated in the plan; and
- 3) A portion of extra levies collected for additional volumes, as listed in Appendix I-3, be paid to the Regional District to pay for disposal costs.

#### **Policy: I 3.1.6 Service Area Revisions**

If the majority of potential users in any service area defined in I 3.1.4 are "opted-out", ISWAC may consider combining the remnant area with another area.

#### **Policy: I 3.17 Collection Contract**

Tender each local service area for weekly refuse service.



**Policy: I3.1.8                      Collection Specification**

Specifications for the local collection service, including container sizes, transfer station use, equipment requirements shall be outlined in the contract and in Appendix I-4.

**Policy: I3.1.9                      Sub-Contracting**

Contractors may arrange to sub-contract portions of their system to other contractors. The prime contractor will be responsible for fulfilling conditions of the contract.

**Policy: I3.1.10                    Fee Collection**

Tender contracts for collection of fees from all areas except Skidegate and Old Massett. Incorporated communities shall have the option of collecting fees for their residents for a rate that will cover their costs.

**Policy: I3.1.11                    Unit Cost**

The total contract costs for all participating service areas plus 5% contingency be summed and divided by the number of collection units to arrive at an overall collection unit fee - this fee will then be divided to determine a quarterly collection billing fee.

**Policy: I3.1.12                    Collection Administration**

The Islands Waste Coordinator be responsible for handling enquiries, fielding complaints, ensuring the billing list is kept up to date and to administer the collection contracts.

**Policy: I3.1.13                    Unpaid Bills**

All user fees that remain unpaid on December 31st shall be added to the property owners taxes as taxes in arrears as provided for in the Municipal Act.

**Policy: I3.1.1.4                  Hardship**

Reduced rates may be set for those on low or fixed income. ISWAC will show the criteria necessary to obtain these rates and will establish set rates according to their annual budget.

**Objective: I3.2      Commercial**  
To provide additional collection services for commercial or institutional users.

**Policy: I3.2.2                      Optional Commercial Collection**

Successful bidders for local collection contracts be given the option of having the Regional District collect fees for additional services provided that:

- 1) revenue equivalent to the volume (less the regular contract) at the transfer station or landfill will be added to the contract payment; and
- 2) adequate notification and records are provided to the Islands Waste Coordinator.



## **I-4.0 TRANSFER STATIONS**

### **Objective: I4.1 Site Use**

To provide convenient facilities for deposit of bulky items, recyclable metals and temporary storage transportable waste such as auto hulks and "white goods".

### **Policy: I4.1.1 Transfer Station Sites**

Provide facilities open to the general public during hours in Appendix 4 at the following locations (figure 8):

- 1) Masset Transfer Station
- 2) Port Clements Regional Landfill
- 3) Skidegate Transfer Station
- 4) Sandspit Transfer Station

### **Policy: I4.1.2 General Specifications**

Design the transfer station to be durable, resist bears and vermin, low maintenance facilities for limited public use (Appendix I-5).

### **Policy: I4.1.3 Standard Size**

The transfer stations shall be designed to accommodate 50 yd<sup>3</sup> roll-off-roll-on bins.

### **Policy: I4.1.4 Maintenance**

Maintenance of the transfer stations (as specified in Appendix I-5) is to be part of the contract awarded for local collection.

### **Policy: I4.1.5 Haulage**

The maintenance contractor shall contact the haulage contractor when the bins require emptying.

### **Policy: I4.1.6 Problem Waste Storage**

Storage areas will be designated for the temporary storage of auto hulks, tires and white goods at all transfer station sites.

### **Policy: I4.1.7 Sandspit Septage Disposal**

The Septage disposal area will continue to be permitted at the Sandspit Transfer Station.

### **Policy: I4.1.8 Wood Waste**

Burning areas for woodwaste and other combustible, non-putrescible wastes will be designated at all the transfer station sites. Controlled burning of such waste will occur when permitted by the Ministry of Forests and the Ministry of Environment.

### **Policy: I4.1.9 Collection of Fees**

The maintenance contractor shall collect fees from the public as specified in Appendix I-3.



**Objective I-4.2**

**Transfer Funding**

To provide a method to fund the capital and operating cost of the transfer station.

**Policy: I-4.2.1      Use of Fees**

Fees collected shall be applied in accordance with Appendix I-3.

**Policy: I-4.2.2      Capital Cost**

The initial capital costs of the transfer stations be funded by:

- 1) Provincial Rural Waste Management Grants;
- 2) Taxation; and
- 3) Grants from Skidegate and Old Massett as determined by the formula in Policy I-2.3.1

**Policy: I-4.2.3      Depreciation**

Additional funds will be collected from taxation and Grants from Skidegate and Old Massett as specified in Policy I-2.3.1 to be deposited in the Capital Reserve account according to Appendix I-3.

**Policy: I-4.2.4      Operating Costs**

Operating costs for the Transfer station will be paid from:

- 1) user charges according to Policy I-4.2.2; and
- 2) monthly charges applied to all collection units as in Policy I-3.1.6.

**Policy: I-4.2.5      Review**

ISWAC shall annually review the transfer station fee appendix and the Capital Reserve transfer and make recommendations for changes to the Regional District Board.

## **I-5.0 HAULAGE**

### **Objective: I5.1**

To provide an efficient system for moving solid waste from the transfer stations to the landfill.

### **Objective I5.2**

To provide a fair method to fund the operation of the haulage system.

#### **Policy: I5.1.1                      Haulage Contract**

One contract be awarded to haul waste from the transfer stations and the Port Clements public drop-off to the active face of the Regional Landfill as specified in Appendix I-6.

#### **Policy: I 5.1.2                      Hours**

A schedule of hauling hours will be established by the contractor and the landfill contractor to minimize cover requirements at the landfill. This schedule is to be reviewed on an ongoing basis by the Islands Coordinator.

#### **Policy: I 5.1.3                      Bin Ownership**

The Regional District will provide the necessary numbers of transfer bins. The contractor will be responsible for all other equipment required (Appendix I-6).

#### **Policy: I5.2.1                      Funding**

The estimated annual cost of the haulage contract will be apportioned amongst the total number of collection units and applied to their quarterly bills.

#### **Policy: I5.2.2**

ISWAC will annually review actual and projected costs and make recommendations regarding upward/downward adjustments.





## ISLANDS REDUCTION INITIATIVES

*Many of the price based reduction policies are also described in other sections. They will be cross referenced accordingly.*

**Goal:** To reduce the amount of solid waste being landfilled.

### I6.0 REDUCTION POLICIES

#### Objective I6.1

To establish economic and regulatory incentives to encourage waste reduction.

#### Policy: I6.1

#### **Recycling Fund**

A Recycling and Waste Reduction Reserve fund be established.

#### Policy: I 6.1.2

#### **Bag Limits**

A bag limit, defined in Appendices I-7, be established for each collection unit. This limit shall be reviewed annually by ISWAC.

#### Policy: I6.1.3

#### **Fee for Extra Bags**

Additional volumes be accepted when a pre-paid tag is attached. Tags will be available at convenient locations as determined by the Waste Coordinator and the Local Collection Contractor with fees allocated according to Appendix I-7.

#### Policy: I6.1.4

#### **Relief from Fee**

No fee will be required for bags gathered during organized cleanups provided prior arrangements are made with ISWAC.

#### Policy: I6.1.5

#### **Use of Tag Fees**

A portion of the tag fees, as outlined in Appendix I-7, will be directed to the Recycling Reserve.

#### Policy: I6.1.6

#### **Tipping Fees**

Volume based tipping fees described in Appendix I-3 will be collected at the landfill and transfer stations (see Policies I-2.3.2 to I-2.3.4, I-4.2 and I-4.2.3 for more information).

#### Policy: I6.1.7 **Problem Wastes**

Fees will be collected for autohulks, tires, white goods and other wastes specified in Appendix I-3. Net revenue will be deposited in the Recycling Reserve.

#### Policy: I6.1.8

#### **Problem Waste List Review**

ILSWAC shall review Appendix I-3 annually and recommend changes to the Regional District Board.

#### Objective I6.2

To discourage landfilling materials that could be utilized elsewhere.

#### Policy: I6.2.1

#### **Material Bans & Surcharges**

Once adequate recycling or reuse options exist, ISWAC may recommend to the Regional District Board the implementation of material bans or surcharges for certain items of the waste stream.



## **I7.0 EDUCATION**

### **Objective I7.1**

To provide information to the public and users of the Islands system that will encourage solid waste reduction, reuse and recycling and proper handling of solid waste.

### **Policy: I7.1.1                      Education**

The Islands Coordinator will organize regular solid waste and recycling waste reduction education programs for schools, local government and other interested groups.

### **Policy I7.1.2                      Funding**

Apply to B.C. Environment for funds to assist in providing for waste reduction education.

## **I8.0 COMPOSTING**

### **Objective I8.1**

Encourage composting as a method for waste reduction.

### **Policy I8.1                      Backyard Composters**

Backyard composting will be encouraged and subsidized from time to time with funds provided by the Provincial Government and from the Recycling reserve.

### **Policy: I8.12                      Other Composting**

ILSWAC will encourage initiatives for commercial and backyard composting operations by providing information on composter design and operation.

## **I-9.0 RECYCLING**

### **Objective:    I9.1    Problem Wastes**

Support recycling of problem wastes and encourage recycling of other materials.

### **Policy I9.1.1                      Problem Waste Recycling**

When sufficient problem waste materials (Appendix I-3) have been accumulated (as determined by the Waste Coordinator) funds may be withdrawn from the Recycling Fund to pay for the handling and shipping of recyclable materials.

### **Policy: I9.1.2                      Problem Waste Coordinator**

The Islands Coordinator will facilitate the proper disposal of problem wastes by :

- a)    being conversant with regulations governing the storage and haulage of special waste; and
- b)    referring persons to the responsible agency. The Islands Coordinator is to receive training in the storage and handling of problem waste.



***Recycling- Continued***

**Policy: I9.1.3                    General Recycling Support**

ISWAC shall encourage Recycling by providing information on nearest available recycling facilities and by providing grants to volunteer recycling groups from the Recycling Fund.

**Policy: I9.1.4                    Recycling Capital Expenditures**

ISWAC will consider a capital grant from the Capital Fund towards the cost of recycling facilities, when it can be demonstrated that operation of such facilities will significantly reduce waste and to extend the life of the landfill, and/or that the originator has a viable marketing and transportation plan in place.

**Policy: I9.1.5                    Public Subsidies**

ISWAC will maintain and review Appendix I-7, which lists all items that will be recycled with public subsidies.

**Policy:I9.1.6                    Recycling at Landfill and/or Transfer Stations**

ISWAC will consider inviting interested parties to operate recycling facilities in specified areas at the Landfill and at transfer stations. Terms of operation will be determined by the Waste Coordinator in conjunction with the local collection contractor.

**Policy: I9.1.7                    Salvage Rights**

The landfill contractor shall have exclusive salvage rights at the Port Clements Regional Landfill and the local collection contractors shall have exclusive salvage rights at Transfer Stations that they are responsible for maintaining.

Figure 9: **IMPLEMENTATION SCHEDULE**  
STAGE 3: ISLANDS SOLID WASTE MANAGEMENT PLAN

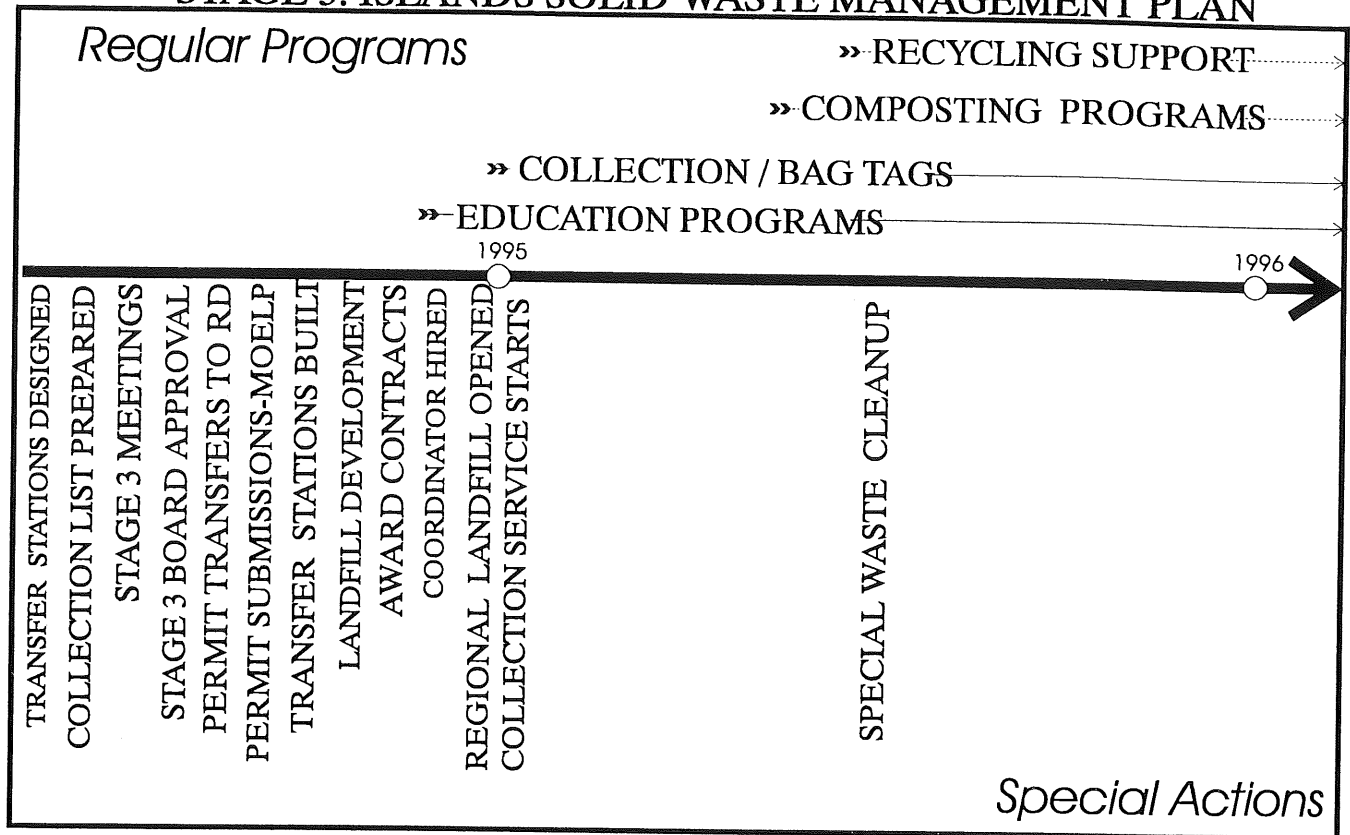


Figure 10: **RESPONSIBILITY FOR PROGRAM**

PROGRAM RESPONSIBLE PARTY	POLICY REVIEWS	ANNUAL BUDGETS	CONTRACT ADMINISTRATION	BILLING & COLLECTION	RESIDENTIAL COLLECTION	COMMERCIAL COLLECTION	RECYCLING	EDUCATION PROGRAMS	TRANSFER STATION MAINTENANCE	LANDFILL MAINTENANCE
RD BOARD	✓	✓								
ISWAC	✓	✓	✓							
COORDINATOR	✓	✓	✓	✓			✓	✓		
COLLECTION CONTRACTORS					✓	✓			✓	
LANDFILL CONTRACTOR							✓		✓	✓
HAULAGE CONTRACTOR										
OTHER CONTRACTS				✓			✓			
INDEPENDANT OPERATORS						✓	✓			

## **I10.0 IMPLEMENTATION**

### **Objective I10.1**

Implement this plan so that Islands residents will have no break in waste services.

### **Policy I10.1.1**

#### **Schedules**

Implement the plan according to the schedules presented in fig. 9.

### **Policy I10.1.2**

#### **Responsibility**

Responsibility for implementing various components of the plan will be according to Figure 10.

### **Objective I10.2      Illegal Dumping**

Ensure that possible negative reactions to some plan policies are addressed during implementation.

### **Policy I10.2.1**

#### **Illegal Dumping**

Encourage the public system contractors to report any incidents of illegal dumping to the appropriate jurisdiction. If incident cannot be investigated in a timely manner by the appropriate jurisdiction, the coordinator will record the incident and forward a detailed report to the appropriate Ministry.

### **Policy: I10.2.2**

#### **Strategies to Prevent Illegal Dumping**

ISWAC will review incidents of illegal dumping and recommend the implementation of one or all of the following strategies:

- 1) publish photos of incidents;
- 2) identify the owners of the illegally dumped refuse and bill them for the proper disposal; and
- 3) the adoption of an illegal dumping bylaw with a schedule of fines for various infractions.

### **Policy I10.2.4**

#### **Enforcement**

ISWAC will apply for funding to B.C. Environment or any other jurisdiction that requires assistance from the Waste Coordinator to enforce their legislation.

### **Objective I10.3**

Ensure that the public and system users are participants in any modifications to this plan.

### **Policy I10.3.1**

#### **Public Comments**

The Islands Coordinator will keep a record of all suggestions and comments from the public and will ensure that ISWAC is kept informed of this information.

### **Policy I10.3.2**

#### **ISWAC Meetings**

ISWAC will meet regularly, not less than quarterly, to review the operations of the Waste Management System and to consider comments from the public. Quarterly meetings will be advertised and open to the public. Meetings dealing with personnel, wages and contract matters may be closed.

### **Policy 10.3.3**

#### **Special Meetings**





































Special public meetings will be held to consider major changes to this plan.



Figure 11:

# FUNDING FOR PLAN PROGRAMS

## STAGE 3: ISLANDS SOLID WASTE MANAGEMENT PLAN

PLAN ITEM \ FUNDING SOURCE	PROPERTY TAXES	SERVICE CHARGE	TIPPING FEES	HANDLING LEVIES	GRANTS FROM BANDS	SENIOR GOV'T GRANTS	BAG TAGS
CAPITAL COST- LANDFILL							
LANDFILL OPERATIONS							
CLOSURE RESERVE							
CAPITAL COST- TRANSFER							
TRANSFER OPERATION							
SPECIAL WASTE DISPOSAL							
HAULAGE							
LOCAL COLLECTION							
RECYCLING CAPITAL COST							
RECYCLING OPERATING							
COMPOSTING PROGRAMS							
EDUCATION PROGRAMS							
COORDINATOR CONTRACT							
ADMINISTRATION							

## *Implementation-Continued*

### **Objective: I104.4 Dispute**

Provide a framework to resolve disputes arising from implementation of the plan.

### **Policy: I10.4**

#### **Dispute Resolution**

When disputes arise between any of participating communities, The Regional District and/or contractors hired to implement the system, it should be resolved by: 1) ISWAC, which may refer the dispute to 2) Participating Regional District directors and any delegates they may choose to invite, who may refer the dispute to 3) the entire Regional District Board."

### **Objective: I10.5 Funding**

Ensure that the entire system is funded to accomplish the goals of this plan.

### **Policy: I10.5.1**

#### **Funding Sources**

Required funds are to be raised from (figure 11):

- 1) Property taxes ;
- 2) User charges from:
  - a) Quarterly unit fees
  - b) Volume based tipping fees
  - c) Bag tags; and
  - d) Special handling levies
- 3) Senior Government grants.

### **Policy: I10.4.2**

#### **Coordinator**

Funding for the cost of an Islands Waste Coordinator will be provided by a unit surcharge applied to the landfill operating fee.







# MAINLAND APPENDICES



**Appendix M-1:**  
**MAINLAND SOLID WASTE COMMITTEE**

A bylaw will specify the following:

**PART 1- APPOINTMENT OF COMMITTEE**

1. The participants in the funding of this Committee shall be the City of Prince Rupert, District of Port Edward, Electoral Areas A and C.
2.
  - a) The Committee shall be composed of seven members.
  - b) Three members shall be appointed by:  
The City of Prince Rupert - 2 members  
The District of Port Edward - 1 member
  - c) The Mainland Directors shall recommend to the Board four members for appointment as follows:  
2 members (one must be the Electoral Area Director for Area "A" or "C").  
1 member from a Local Environmental or Recycling Group.  
1 member from a First Nations community or organization based in the Mainland area
3. All appointments shall be for two years and shall expire in January but may be extended until successors are appointed.
4. The Committee shall elect one of its members as chair and another as vice-chair to act in the absence of the chair.
5. Anyone with a pecuniary interest in any aspect of the Mainland Solid Waste Management System is not permitted to be a member of this committee.
6. In the event of the resignation of a member of the Committee, the Board may appoint a successor to serve the balance of the term.
7. The Regional District will assign a secretary to record minutes and carry on the business of the commission.

**PART II - DUTIES AND PROCEDURES**

1. The duties of the Committee shall be the administration and implementation of the Mainland part of the Solid Waste Management Plan.
2.
  - a) A quorum is a majority of the members of the Committee.
  - b) A decision of the Committee shall be made by a majority of the members present at a meeting.
  - c) The Chair or any two members may call a meeting of the Committee upon giving at least seven days notice to each member.



*Appendix M-1, Mainland Committee*

3.
  - a) The Committee shall cause proper records to be kept of its proceedings.
  - b) A copy of the minutes and of all reports shall be sent to the Regional Board.
4. During the month of October in each year the Committee shall forward to the Administrator of the Regional District:
  - a) a report giving a statistical analysis of the success/failure of current years operations;
  - b) a report showing implementation plans for the coming year; and
  - c) a detailed budget for the coming year.
5. All accounts or expenses incurred by the Committee shall be authenticated by the Chair, after being so authenticated, forwarded to the Regional District for payment.
6. In order to enable the Committee to perform its function and to carry out its duties in accordance with the true intent of the purpose for which it was created, the Regional District's Secretary-Treasurer shall, whenever required, give the Committee such assistance as it may reasonably require without direct instruction of the Board.

*\*Note: Bylaw 245, containing these provisions was adopted in November, 1993*



## **Appendix M2:**

### **MAINLAND SOLID WASTE REDUCTION SERVICE**

A bylaw will specify the following:

#### **Service**

1. There is hereby established, pursuant to Section 789(1) (c.1) of the Municipal Act, the local service of the regulation, storage and management of municipal solid waste and recyclable material, including the regulation of facilities and commercial vehicles used in relation to these matters; such service to be known as Mainland Solid Waste Management.

#### **Service Area and Participating Areas**

2. The service area boundaries for the service shall be coterminous with that of Electoral Areas "A", "C", the City of Prince Rupert and the District of Port Edward of the Skeena-Queen Charlotte Regional District.
3. Participating areas shall be Electoral Areas "A", "C", the City of Prince Rupert and the District of Port Edward.

#### **Cost Recovery And Apportionment of Costs**

4. The annual cost of the service shall be levied and collected by:
  - a) a property value tax on the net taxable value of land and improvements within the service area;
  - b) fees and other charges; and
  - c) sales of recyclable materials.
5. The monies collected shall not exceed \$0.20 per thousand of the net taxable assessment fixed for general purposes.
6. The apportionment of the net costs of the service shall be on the basis of the converted value of land and improvements pursuant to Section 808(2) of the Municipal Act.



### **Appendix M3:**

## **BAG LIMIT SPECIFICATIONS**

Area Affected: City of Prince Rupert  
District of Port Edward

Implementation Date: A Schedule of Implementation to be set in January, 1995.

Bag Limit: Two Bags or cans per household per week

Specifications: Containers must conform to specifications listed in local government bylaws

Extra Bags: Additional bags will be collected provided they have a bag tag sticker or equivalent payment.

Bag Tags: Bag tags may be purchased for \$1.50 from the City of Prince Rupert and the District of Port Edward or other locations that they may designate.



## Appendix M4: TIPPING FEES, SERVICE CHARGES, MATERIALS RESTRICTIONS

This Appendix should be considered as advisory guidelines to the City of Prince Rupert or any other jurisdiction within the Mainland area of the Regional District.

- 1) **Tipping Fees**      Weight based tipping fees should be continued to be charged for materials dumped at the landfill with the following modifications:

a) **Base Fees for Capital & Closure Costs:** a base level weight based fee be charged for all materials that will be permanently deposited at the landfill. This fee should be calculated according to this formula:

$$\text{Base fee} = \frac{(\text{Estimated Closure Costs}) + (\text{Total Debenture Cost}) \$}{(\text{Total Capacity of Present landfill}) \text{ tonnes}}$$

The base fee should be deposited in a capital reserve fund that will pay for debentures issued to pay for the capital costs of the landfill and will also provide for a reserve to be applied toward closure costs. The closure portion of the fee will ensure that surplus funds are available to pay debenture costs in years when waste reduction efforts cause collected fees to be less than a particular years debenture payment.

b) **Fees for Operations:** additional fees to be assessed to cover annual operating costs as estimated by the City of Prince Rupert:

$$\text{Operations fee} = \frac{(\text{Estimated Annual Operating Costs}) \$}{(\text{Estimated Annual Material}) \text{ tonnes}}$$

c) **Reduced fees for Woodwaste and Demolition Waste:** if a tub grinder is purchased, a lower tipping fee should be considered for woodwaste and demolition wastes to reflect any savings in operating costs resulting from reduced volume or use of this material for daily cover.

d) **Fees for Special Wastes:** Special wastes be assessed fees that are set at a level that will cover the eventual cost of removal from the landfill plus any handling or administrative fees the City of Prince Rupert assesses. The following fee schedule will be revised as soon as actual removal costs are known:

White Goods Storage & Removal Fees:  
Stoves, dishwashers, washers, dryers.....\$5.00 each  
Refrigerators, freezers, hot water tanks.....\$10.00 each

### 2) **Materials Bans & Surcharges**

The following materials should be subjected to a **ban** once it can be demonstrated that viable alternative disposal options exist: lead-acid batteries, oil, paint.

The following materials should be subjected to a **surcharge** once it can be demonstrated that viable alternative disposal options exist: corrugated cardboard, newsprint, tires. Any funds collected should be applied toward the operating cost of the landfill (thus reducing the tipping fee to other users).



## **Appendix M5:**

### **RECYCLING SERVICE SPECIFICATIONS**

Specifications here cover elements of the Recycling service that are likely to change with market conditions, senior government legislation etc. General policies can be found in the Bylaws in Appendices 1 and 2.

- 1) Depot Operations:** A recycling depot will serve primarily Mainland residents. Depot operations will include accepting , processing and marshalling of materials prior to shipping. Listed materials will be accepted at the depot at no cost to any Regional District resident. However, notice must be provided to depot staff for loads in excess of 1 tonne and the depot reserves the right to reject any materials that staff deems contaminated. The depot will be open to the public for at least 32 hours per week.
- 2) Drop-off Facilities:** Drop-off facilities will be provided at convenient locations to ensure that Mainland residents will be able to drop-off their recyclables at any time. Isolated communities will not be provided with special facilities but may deposit their recyclables when they visit Prince Rupert for shopping.
- 3) Materials accepted:** Materials will be accepted for recycling provided that markets exist and revenues from the sale of materials exceeds shipping costs. If processing costs become excessive for a material (as determined by budget projections established by the Operations manager), it may be discontinued. All materials listed will be accepted at the depot but may not necessarily be accepted at drop-off depots.
- Materials Accepted:
- clean aluminum and steel (tin) cans
  - clean type 2 plastic milk & water bottles (no lids)
  - dry, clean newsprint
  - dry, clean corrugated cardboard
  - dry, clean boxboard
  - stapled magazines
  - office grade paper (without contaminants)
- 4) Additional Services:** The following additional services are available on a fee for service basis:
- paper shredding
  - collection of recyclables
  - provincial paint recycling
  - beverage container returns



## APPENDIX M6: PUBLIC PARTICIPATION

The public participation program was initiated early in January 1991 when invitations to sit on an advisory committee were sent to fifty nine business, environmental and other groups. Separate advisory committees were formed for the Mainland and Islands areas of the Regional District. For Stage Three, the Mainland Solid Waste Advisory Committee became a permanent Board appointed Committee. Most of the participants had been involved in the planning process earlier, however.

The following is a list of past and present members of the Mainland Advisory Committee:

Ron Bedard - District of Port Edward	Robert Letts - Area "C" Director
Michel Benoit - Prince Rupert Fisherman's Co-op	Jean Martin - Pr. Rup. Recycling Society
Lew Cranford - City of Prince Rupert	Herb Pond - Public Representative
Jim Cochrane - Pulp & Paper Workers Union	Rufus Reece - Lax Kw' Alaams Band
Lew Cranford - City of Prince Rupert	Stephanie Slater - Pr. Rup. Recycling Society
Jim Cochrane - Pulp & Paper Worker's	Spence Stanyar - North Coast Tribal Council
Sheila Dobie - Pr. Rup. Recycling Society	Mike Stamhuis - City of Prince Rupert
Greg Fletcher - Regional District	Kevin Stewart - Pr. Rup. Recycling Society
Ian Hourston - Pr. Rup. Recycling Society	Tim Thomas - District of Port Edward
Alan John - North Coast Tribal Council	Bob Thompson - City of Prince Rupert
Kelly Johnson - B.C. Packers	Henry Tom - Pulp & Paper Worker's Union
Sue Kopelman - Pr. Rup. Recycling Society	Larry Valentine - Chamber of Commerce
George Kuntz - City of Prince Rupert	Albert White - North Coast Tribal Council
Jim Lawson - Lax Kw' Alaams Band	Terry Wright - District of Port Edward
Stephen Lear - Canadian Coast Guard	
P.J. Lester - Regional District	

The following B.C. Environment and Regional District Staff also contributed to the plan development:

Bryce Barnewall - Regional District Administrator	Mark Ho - Regional District
Janet Beil - Regional District	Frazer McKenzie - B.C. Environment
Vicky Grainger - Education Coordinator	Ed Rottmiller - B.C. Environment
	Don Wilson - Operation Manager Depot

David Forgie & Janice Voss of Associated Engineering prepared Stage 1 & 2 of the plan.

### MEETINGS

All Mainland Committee and public meetings were held in Prince Rupert.

#### Committee

<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>		
April 18, 1991	October 1, 1992	December 2, 1993	February 17, 1994	September 13, 1994
May 16, 1991	January 21, 1993	December 9, 1993	February 24, 1994	October, 26, 1994
June 13, 1991	February 5, 1993	December 14, 1993	March 18, 1994	
August 22, 1991	April 1, 1993	January 11, 1993	April 21, 1994	
April 3, 1993	June 17, 1993	January 24, 1994	May 10, 1994	
			June 14, 1994	
			August 11, 1994	

#### Public Meetings

<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>
November 7, 1991	June 17, 1993	September 15, 1994
May 7, 1992	October 27, 1993	



*Skeena-Queen Charlotte Regional District*  
*Stage 3: Solid Waste Management Plan*



## ISLANDS APPENDICES



## **Appendix II:** **ISLANDS SOLID WASTE COMMITTEE**

A bylaw will specify the following:

### **PART 1- APPOINTMENT OF COMMITTEE**

1. The participants in the funding of this Committee shall be the Village of Masset, Village of Port Clements, Electoral Areas D and E.
2.
  - a) The Committee shall be composed of nine members.
  - b) Two members shall be appointed by:  
Village of Masset - 1 member  
Village of Port Clements - 1 member
  - c) The Islands Directors shall recommend to the Board seven members for appointment as follows:  
\*2 members from Area "D"  
\*1 member from Area "E"  
2 members from Local Environmental or Recycling Groups (1 south, 1 north).  
1 member from Skidegate  
1 member from Old Masset  
\*one must be the Director Area "D" or "E"
3. All appointments shall be for two years and shall expire in January but may be extended until successors are appointed.
4. The Committee shall elect one of its members as chair and another as vice-chair to act in the absence of the chair.
5. Anyone with a pecuniary interest in any aspect of the Mainland Solid Waste Management System is not permitted to be a member of this committee.
6. In the event of the resignation of a member of the Committee, the Board may appoint a successor to serve the balance of the term.
7. The Regional District will assign a secretary to record minutes and carry on the business of the committee.

### **PART II - DUTIES AND PROCEDURES**

1. The duties of the Committee shall be the administration and implementation of the Islands part of the Solid Waste Management Plan.
2.
  - (a) A quorum is a majority of the members of the Committee.
  - (b) A decision of the Committee shall be made by a majority of the members present at a meeting.
  - (c) The Chair or any two members may call a meeting of the Committee upon giving at least seven days notice to each member.
3.
  - (a) The Committee shall cause proper records to be kept of its proceedings.
  - (b) A copy of the minutes and of all reports shall be sent to the Regional Board.



*Appendix 11, Islands Committee*

4. During the month of October in each year the Committee shall forward to the Administrator of the Regional District:
  - a) a report giving a statistical analysis of the success/failure of current years operations;
  - b) a report showing implementation plans for the coming year; and
  - c) a detailed budget for the coming year.
5. All accounts or expenses incurred by the Committee shall be authenticated by the Chair, after being so authenticated, forwarded to the Regional District for payment.
6. In order to enable the Committee to perform its function and to carry out its duties in accordance with the true intent of the purpose for which it was created the Regional District's Secretary-Treasurer, shall whenever required, give the Committee such assistance as it may reasonably require without direct instruction of the Board.



**Appendix I2:**  
**LANDFILL FILLING PLAN**

Summary of "*The Port Clements Sub-Regional landfill Design and Operations Plan*" by Gartner Lee Limited. This document should be consulted for more information.

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**EXECUTIVE SUMMARY**

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The Port Clements landfill site is situated on Graham Island, approximately 9.6 km north of the Village of Port Clements. It is anticipated that this site will become a sub-regional landfill which will service the Queen Charlotte Islands within the next year. Past studies conducted by Gartner Lee Limited (GLL) indicated that this site could be operated as a natural attenuation landfill provided that efforts were made to reduce leachate generation and that environmental monitoring was conducted to detect impacts. This document summarizes the conceptual designs and operational procedures required to construct the landfill.

The geology at the site consists of approximately 10 m of sands and silty sands underlain by a dense till stratum. The topography dips from north to south. Two surface water channels drain the site and meet near the southern property boundary. Surface water continues to flow south from this junction until it joins with Grouse Creek and flows west towards Kumdis Slough. Monitoring is currently being conducted to establish background flow and water quality characteristics as well as fisheries significance.

Until the results of these studies are known a more accurate assessment of potential impacts cannot be made. The strategy adopted in this report was to design a landfill using the best available data to date under the assumption that continued environmental monitoring would occur. If significant environmental impacts are detected, it will be necessary to adopt leachate management contingency options and/or modify the landfill design.

Using a water balance technique, it was estimated that during the wet times of the year a landfill with a 3 ha footprint could be operated without significantly impairing surface water quality south of the site. The limited stream flow data collected at the site suggests that a landfill of this size could also be operated during dry periods of the year without significantly impacting surface water quality.

The proposed landfill configuration occupies a footprint of 3.07 ha and a volume of 249,420 m<sup>3</sup>. After approximately 35,630 m<sup>3</sup> of air space has been consumed by cover material, the resulting landfill capacity is estimated to be 119,365 tonnes. Under three waste generation scenarios, it was estimated that this landfill design will provide 41 to 55 years of service. Under these conditions, the landfill will be able to serve the area's needs until the years 2036 to 2050.



The landfill is to be constructed in four phases which will be oriented in a northeast southwest fashion. The four phases will be constructed adjacent to one another as the landfill progresses from the southeast to the northwest. The side slopes of the landfill will be constructed at a 3h:1v slope whereas the landfill crest will be graded at a 10% slope to promote rapid run-off.

The majority of waste deposited in the landfill will be hauled from transfer stations. This waste will be deposited directly onto the active face. A roll-off bin will be provided near the landfill gate so that privately owned vehicles will not have to access the active face. Refuse deposited on the active face will be spread out and compacted daily using a rubber wheeled loader. This piece of equipment will perform adequate compaction while being versatile enough to perform other tasks.

Refuse will be covered at the end of each day with a combination of soil and a durable geosynthetic tarp. Areas which will remain inactive for more than a month will require 0.3 m of intermediate cover taken from the adjacent borrow pit. Areas which are awaiting closure or will be inactive for more than a year will require 0.3 m of a low permeability cover which will likely have to be brought in from off-site sources.

The infrastructure associated with this landfill includes a series of access roads, attendant facilities and recycling areas. In addition, a fire suppression system has been devised. The construction of an electrified fence has been recommended in order to protect against scavenging animals. The construction of a controlled waste facility has been presented as an option to the SQCRD to store materials which have been intercepted from the waste stream. At the request of the SQCRD, an area has been reserved northwest of the landfill as a potential site for a septic lagoon.

A series of environmental control systems have also be developed for this site. A diversion ditch system will eventually surround the landfill to prevent surface run-on during filling operations and to carry surface run-off away from the completed portions of the landfill. A method of dust control will be selected based on the severity of the problem. Animal and vector control will be achieved through the use of cover material and the construction of an electrified fence. Wind-blown litter will be captured with the use of temporary fencing. Litter which is not captured by the fencing will be collected at regular intervals as part of a litter control program. Two possible final cover options have been developed. A preliminary assessment of the two options has suggested that a system which incorporates 1 m of clay will divert 88% of precipitation whereas a system which incorporates a High Density Polyethylene (HDPE) and 0.3 m of clay will achieve a 97% diversion efficiency. In addition, long term environmental monitoring of the surrounding ground water and surface water resources will be conducted to detect any impacts which result from filling operations. If such monitoring detects unacceptable impacts, leachate management contingency options will have to be implemented.

It was estimated that the capital cost associated with starting up the landfill will be approximately \$171,250. Annual operating costs, which include a sinking fund contribution to finance closure, will likely range between \$140,200 and \$141,705. When viewed with respect to landfill capacity, the unit cost of operating this site will be in the order of \$57 to \$58 per tonne of refuse deposited.



## Appendix I3:

## 1) COLLECTION FEES

Collection units are considered to be any dwelling, place of residence, trade premises or public refuse container representing a pickup location for a Garbage Collector.

Collection fees for any given year will be assessed according to this formula:

$$\text{Monthly Unit Charge} = 1.05 \times \left( \frac{\text{A}}{\text{(Collection Units x 12)}} + \frac{\text{B}}{\text{(Total Units x 12)}} \right)$$

\*Tipping fees only include charges for materials that will be permanently deposited at the landfill. If a surplus results from higher than expected revenues, an adjustment will be made in the next years fee structure. If a deficit results from lower than expected revenues, required funds will be withdrawn from the Closure fund, and replaced by an adjustment to the next years rate. If any community opts out of the collection service they will pay a lump sum to the Regional District based on Part B of the formula. Units are considered to be for participating areas for the particular aspect of the service.

## 2) TIPPING FEES PAYABLE AT THE LANDFILL OR TRANSFER STATIONS

- a) **General Refuse:** (Volume based fees for tipping general refuse that will be deposited at the landfill)
- |  |                          |
|--|--------------------------|
| Per Standard Garbage Bag                             | - \$2.00                 |
| Oversized Garbage Bags                               | - \$3.00                 |
| Loose in small (pick-up) truck or equivalent vehicle | - \$10.00                |
| Dump truck load (per axle)                           | - \$50.00                |
| Commercial Collection Vehicles                       | - \$10.00/m <sup>3</sup> |

Fees to be collected at the landfills or transfer station with receipts issued.

- b) **Demolition, Woodwaste and clearing waste** - A lower fee will be charged for these materials so long as options remain for alternate disposal at the landfill or transfer stations, such as burning or for use as cover material.

- |  |                         |
|--|-------------------------|
| Loose in small (pick-up) truck or equivalent vehicle | - \$5.00                |
| Dump truck load - \$13.00 (per box)                  | -\$13.00                |
| Commercial collection vehicle                        | - \$5.00 M <sup>3</sup> |

Fees to be collected at the landfills or transfer station with receipts issued.

- c) **Septage** - At the Landfill or Sandspit Transfer Station \$50.00 per truck load.  
Fees to be collected at the landfills or transfer station with receipts issued.

- d) **Temporary Storage Fees** - To be assessed for material that will be temporarily stored at the landfill or transfer stations. Fees should cover the cost of final disposal.
- |  |                           |
|--|---------------------------|
| General white goods (stoves, dishwashers, dryers, washers) .....                       | \$6.00                    |
| Special white goods (refrigerators, hot water tank, freezers, air conditioners ) ..... | \$10.00                   |
| Autohulks .....  | \$40.00                   |
| Tires .....  | \$1.00 for standard sizes |
| Oversized Tires .....  | \$5.00                    |
| Lead Acid Batteries .....  | \$1.00                    |
- These fees to be deposited separately in the Recycling Fund.

- e) **Limited Special Waste Handling** - Special fees will be assessed for materials that will be temporarily stored at Regional District facilities and require special handling according to provincial legislation. These fees will be collected according to methods prescribed by B.C. Environment. Materials that will be considered include only:
- Paint
  - Lead acid batteries
  - Waste oil

- f) **Materials Bans or Surcharges.** Noxious substances specified in the permit will be banned from the landfill except where specified for temporary storage in Section e. In addition, surcharges or bans will be considered for the following materials *once alternative disposal methods are available*:
- Tires
  - Lead acid batteries
  - Other batteries
  - Cardboard

If surcharges are considered, fees will be listed in this appendix. Fees from surcharges will be deposited in the Recycling Fund.

### 3) CAPITAL RESERVE FUNDS To be administered by the Regional District.

- a) **Closure Fund:** Revenues for this fund will come from an annual charge levied against the assessment of participating areas and to Old Massett and Skidegate according to their share of population from the last census data to cover expected closure costs (as specified in Appendix I-2) and the replacement cost of landfill and transfer station capital goods such as transfer bins. Allowable expenditures include replacement of capital goods with an expected life of 5 or more years, studies relating to closure or contingency measures required for meeting Landfill Regulations, contingency capital works, partial and final landfill closure.
- b) **Recycling Fund:** Revenues will be from sources identified in this appendix. Expenditures from this reserve will be used to assist to recycle materials listed in 2 d,e,&f here, materials listed in Appendix I-7, for backyard composters and for other projects that will reduce solid waste.

## Appendix I4

### COLLECTION SERVICE SPECIFICATIONS

A collection service bylaw will be developed to contain the following:

1. **DEFINITIONS:**

In this Appendix unless the context otherwise requires:

- (a) **"Garbage"** shall mean and include any and all rejected, abandoned or discarded wastes, or vegetable or animal food, floor sweepings, crockery, glass or metal ware having contained foods, ashes, grass, hedge clippings or other garden refuse or rubbish except such garden refuse which, owing to its length or bulk, cannot be placed in the receptacle provided.
- (b) **"Garbage Collector"** shall mean the person contracted from time to time by ISWAC to collect garbage, and to carry out the duties determined in their contract.
- (c) **"Dwelling"** shall mean any building or place of living or dwelling including any apartment house, licensed rooming-house, boarding house or terrace of house under the same roof or any building in which more than two families live, but not including hotels.
- (d) **"Trade Premises"** shall mean any warehouse, factory, store, hotel, motel, eating house, auto camp, wholesale or retail business place, garage or office building and any building other than a dwelling.
- (e) **"Apartment House"** shall mean a building which is , or is intended to be occupied as a habitation or place of residence by more than two families living independently of one another upon the same premises, and having a common entrance to three or more suites and shall also include any apartment house, hotel, licensed rooming-house, licensed boarding house or terrace of houses under the same roof, or any building in which more than two families live, abide or dwell.
- (f) **"Owner"** shall mean and include a person to whom the definition "Owner" set forth in Section 1 of the Municipal Act applies.
- (g) **"Occupier"** shall mean any person occupying any dwelling, habitation, place of residence or trade premises but shall not include any person who is merely a boarder, roomer, or lodger therein.
- (h) **"Regulation Garbage Receptacle"** shall mean a galvanized iron or plastic receptacle, circular in design and provided with a good and sufficient water tight cover, having a capacity of not more than .071 m<sup>3</sup> and having a diameter of not more than 41 cm and a depth of not more than 61 cm. The maximum gross weight of any receptacle plus its contents must not exceed 30 kg.
- (i) **"Solid Waste Management Program Coordinator"** or **"coordinator"** shall mean a person hired by the Regional District to manage various contracts, act as a liaison between the public and the contractors, provide information and other duties.





## 2. RESIDENTIAL WASTE

### (a) Mandatory Service

Every occupier of residential or trade premises located within the service area shall use the regional collections system for the removal and disposal of garbage generated in their premises.

### (b) Garbage Containers

Every owner of an apartment house shall provide and maintain in good order and repair regulation garbage receptacles sufficient in number to contain all garbage from such dwelling or apartment house.

### (c) Deposit of Garbage Into Containers

Prior to placing garbage in containers it must be bagged and tied in approved plastic garbage bags.

### (d) Placing of Garbage Receptacles

Garbage receptacles shall be placed at the curb or edge of the street right-of-way or in garbage containers prior to 8:00 am on the designated pick-up day for :

- 1) the collection area; and
- 2) If a pick-up falls on a Statutory Holiday ISWAC will advertise the day and time the service will be provided.

### (e) Contents and Covering of Cans

- (i) No liquids or free water shall be put or placed in or allowed to run or accumulate in any regulation garbage receptacle, and all such regulation garbage receptacles shall, at all times, be kept securely covered with a water tight cover.
- (ii) No person shall place any explosive substance in any garbage receptacle.
- (iii) All garbage such as rejected, abandoned or discarded vegetable or animal food shall be drained and wrapped before being deposited in a regulation garbage receptacle.

## 3. COMMERCIAL WASTE

*In addition to specifications listed in '2':*

### (a) Deposit of Garbage Into Containers

Trade waste must have all loose papers bagged or boxed, smaller boxes broken down and placed in larger boxes. All putrecibles must be bagged, tied and placed in regulation garbage containers. Special arrangements shall be made with the Collector to pick-up cooking oil.

(b) **Garbage Containers**

Every occupier and or every owner of a trade premise shall provide and maintain in good and sufficient order and repair for such occupied or owned trade premise regulation garbage receptacles sufficient in number to contain all garbage from such trade premise.

(c) **Contents and Covering of Cans**

- (i) No liquids or free water shall be put or placed in or allowed to run or accumulate in any regulation garbage receptacle, and all such regulation garbage receptacles shall, at all times, be kept securely covered with a water tight cover.
- (ii) No person shall place any explosive substance in any garbage receptacle.
- (iii) All garbage such as rejected, abandoned or discarded vegetable or animal food shall be drained and wrapped before being deposited in a regulation garbage receptacle.

4. **CONDITION OF GARBAGE RECEPTACLES**

Garbage receptacles shall be accessible for inspection at all reasonable times. When any receptacle has been condemned by the Regional District as unfit for the purpose, such receptacle shall be removed along with the garbage, and the occupier or owner of an apartment house, dwelling or trade premises from which any such condemned receptacle has been removed shall forthwith provide a suitable and sanitary regulation garbage receptacle.

5. **PAYMENT OF FEES**

- (a) Every occupier or owner of a residence, except in cases where the residence is on an Indian Reservation, or trade premises shall be assessed a monthly service charge described in a collections bylaw. If a residence is on an Indian Reserve, the appropriate Band Council shall pay the standard monthly charge on behalf of the occupier or owner.
- (b) Fees for additional services will be collected by the Regional District *only if* the Collector makes prior arrangements with the Coordinator.
- (c) All fees and charges remaining unpaid on the thirty-first day of December in any year shall be added to and from part of the taxes payable in respect of the land on which said dwelling, apartment house or trade premises is situated and shall be entered upon the collector's roll as taxes in arrear. If a trade premises is located on an Indian Reserve such unpaid fees and charges will be forwarded to a collection agencies.



**6. APPOINTMENT OF COLLECTOR**

The Regional District will contract a person or persons to act as a Garbage Collector or Garbage Collector to perform the duties listed below. The contract(s) shall be for a three year period with an option to renew for an additional two years.

**7. GARBAGE COLLECTOR DUTIES**

It shall be the duties of the garbage collector to:

- (a) to collect garbage from regulation garbage receptacles;
- (b) to report any violation of sanitary laws by citizens to the Coordinator;
- (c) to clean up any garbage spilled or scattered in the operation of collection;
- (d) to answer all complaints courteously and promptly;
- (e) not to trespass needlessly on private property but to follow pedestrian walks and not cross from one property to another;
- (f) to provide garbage vehicles of good and workable construction and have such vehicles equipped with sufficient covers so that no garbage is permitted to escape;
- (g) to have such vehicles washed, cleaned and disinfected at regular intervals as will meet the requirements of the Regional District;
- (h) to have all garbage collection equipment accessible to the Regional District at all times;
- (i) to see that garbage vehicles do not interfere needlessly with traffic and that such vehicles are not left standing on the street; and
- (j) to abide by all applicable Federal, Provincial and Local laws and requirements.

**8. COLLECTION OF GARBAGE FROM DWELLING AND TRADE PREMISES**

Garbage shall be collected and carried away by the Garbage Collector(s) from all dwellings at least once each week in each and every year, at such times as directed by ISWAC.

**9. COLLECTION FROM TRADE PREMISES, APARTMENTS, ETC.**

Additional collection services may be arranged with the contractor Regional District on a fee for service basis with the collection terms settled between the owner and collector. A portion of the fees will be paid to the Regional District according to the rates specified in Appendix I-2.



**10. COLLECTOR'S INSURANCE**

The Garbage Collector shall indemnify and save harmless the Regional District from all fines, suits, proceedings, claims, demands, or actions of any kind or nature of from anyone whomsoever, arising or otherwise connected with the performance of its covenants herein contained, and further shall, prior to the commencement of operation, at his own expense, keep in force by advance payment of premiums, a general liability insurance policy specified in their contract. The Regional District shall be an additional named insurance on said policy. The Regional District shall be notified of any material change to said policy. The insurance shall be in a form satisfactory to the Regional District and a copy of the current policy shall be provided to the Regional District.

**11. PERFORMANCE BOND**

The Garbage Collector shall provide a security deposit equal to 6 monthly payments under the contract(s), without interest payable to the Contractor(s) until the contract(s) have been completed to the satisfaction of the Regional District.

**12. GENERAL**

For the purpose of this Appendix a garbage service shall consist of the removal of the contents of not more than two receptacles of a size specified in Section 1(h) of this Appendix.



## **Appendix I 5:** **TRANSFER STATIONS**

### **A. TRANSFER STATION GENERAL SPECIFICATIONS**

Transfer stations will be located as follows:

<u>Location</u>	<u>Communities Served</u>
Hecate Junk-it Landfill, Moresby I.	Sandspit, Moresby Island
Skidegate Landfill, DL2797, Graham I.	Queen Charlotte City, Skidegate Landing, Skidegate
Port Clements Regional Landfill	Port Clements, Tlell, East Coast Graham I.
Masset, DL233	Masset, Old Masset, North Beach

Each transfer station will be designed to meet the following conditions:

- 50 yd<sup>3</sup> roll off containers with lids to be accommodated
- adequate access to be provided for:
  - a) garbage trucks
  - b) public (cars, pickups, etc.)
  - c) refuse hauling trucks
- walls and floor to be constructed of cement and/or steel
- approach ramp and access road to be detailed from existing roadways
- retaining wall backfill material to be specified for type and placement
- a gate and fence required to restrict public access
- system should be designed to allow 1) ease of use and 2) ease of cleanup.
  - lids have to be closed when not in use; and
  - containers have to be deposited and picked up safely.
- The National Building code of Canada (N.B.C.) latest edition and all pertinent recommendations of the Canadian Standards Association (CSA) shall be the basis for the design of this project.
- all transfer sites to be serviced on at least a weekly basis

The Facility at the Port Clements Regional Landfill will not necessarily be used by garbage trucks.

Sufficient Bins will be provided at Transfer stations to accommodate peak daily garbage storage for each service area. Two extra bins will be stored at the Regional landfill site- one to be used as an empty container to be rotated on back-hauls and the other to serve sites in peak demand periods.



**B. COLLECTION CONTRACTOR DUTIES FOR TRANSFER STATION MAINTENANCE**

Contractors who have been awarded local Garbage Collection contracts will also be responsible for the maintenance of the transfer stations which they use. The Contractor(s) will:

1. Perform minor clean-up at the site each day it is open to the public or contractors. This will include collection of proliferated refuse around the refuse and recycling stations as well as accumulations inside and outside the fence and the gate.
2. Ensure that the transfer container lids are kept free of snow during winter open hours.
3. Ensure that public use areas are kept free of snow during winter open hours.
4. Contact the Refuse Haul Contractor when bins are reaching capacity.
5. Assist the public with the use of facilities at the Transfer Station.
6. Act as contact person.
7. Provide suitable transportation and tools necessary to carry out the duties and responsibilities of this Agreement.
8. Direct residents utilizing this facility to the appropriate area for disposal of specific refuse materials.  
Household and commercial refuse shall be deposited into the 50 yd<sup>3</sup> transfer containers. Demolition, land clearing and construction debris along with bulky items such as major household appliances shall not be allowed in the 50 yd<sup>3</sup> transfer containers but must be directed to the selected materials refuse disposal facility adjacent the refuse transfer station. The Contractor shall direct residents with these materials to the appropriate location within the refuse disposal facility and charge a tipping fee for the disposal of said materials.
9. Collect appropriate fees and issue receipts to users of the facility on behalf of the Regional District.
10. A deposit system approved by the Regional District shall be set up to deposit monies collected for tipping fees.
11. Initially the transfer stations will be open for 16 hours a week. ISWAC may adjust the opening hours to reflect utilization and to achieve economies



*Appendix 15 Transfer Stations- Continued*

12. The Contractor shall ensure that the refuse transfer stations are securely locked during all closed hours.
13. The Contractor shall perform minor repairs to the refuse transfer container latches, gates and fences.
14. The Contractor shall be responsible for any on-site amenities including shelter , toilet and drinking water.
15. The Contractor shall maintain daily records and provide these to the Solid Waste Management Program Coordinator monthly.
16. The Contractor shall provide the name(s) of relief worker(s) to be utilized in times of illness, vacations, etc.
17. Any works not specified in this appendix or in the contract for which compensation is requested, must have prior approval of the Coordinator.



**Appendix I6:**  
**REFUSE HAULING SPECIFICATIONS**

**Refuse Hauling Contractor Duties:** Contracts shall be awarded for three years, with an option to renew for an additional two years during which time the Contractor shall:

1. Provide the equipment required to load, unload and transport Regional District owned 50 cubic yard steel roll-off containers for the prescribed purpose of transferring municipal refuse on an as-required frequency basis from the following Islands Transfer Stations (Minimum number of trips per week specified)  
1) Sandspit; 2) Skidegate; 3) Port Clements; 4) Masset  
(1) (2) (1) (2)
2. Transport empty containers to the Islands Transfer Stations and place in the required location.
3. Clean up any spillage incurred when loading or unloading.
4. Load full containers and transport to the Port Clements Regional Landfill site for discharge.
5. Maintain the Regional District owned containers in a clean condition inside and out.
6. The imposition of the BC Ministry of Transportation and Highways road restrictions shall not be deemed justifiable reason for defaulting on the required service.
7. Be solely responsible for the operation and maintenance of any equipment whatsoever used, rented, leased, or owned by the Contractor.
8. Indemnify and save harmless the Regional District from all fines, suits, proceedings, claims, demands, or actions of any kind or nature of from anyone whomsoever, arising or otherwise connected with the performance of the contract, and further shall, prior to the commencement of operation, at his own expense, keep in force by advance payment of premiums, a general liability insurance policy in an amount stated in the contract. The Regional District shall be an additional named insurance on, and be notified of any material change to said policy. The insurance shall be in a form satisfactory to the Regional District and a copy of the current policy shall be filed with the Regional District.
9. Provide the minimum level of service for a flat rate over the life of the contract, with additional services provided according to schedule of fees for additional trips to each site.
10. Provide a security deposit equal to 6 monthly payments under the contract, without interest payable to the Contractor until the contract has been completed to the satisfaction of the Regional District.
11. Establish the haulage unit rate according to expected volumes of refuse base on: a) Stage 2 estimate or b) actual previous years volumes multiplied by the appropriate content.





**Appendix I7:**  
**BAG LIMIT SPECIFICATIONS**  
**RECYCLABLE MATERIALS LIST**

**1) BAG LIMIT SPECIFICATIONS**

**Implementation Date:** January 1, 1995

**Bag Limit:** Two Bags per household per week provided they fit within a Regulation Garbage Receptacle.

**Specifications:** Container specifications are listed in Appendix 3.

**Extra Bags:** Additional bags will be collected provided they have a bag tag sticker.

**Bag Tags:** Bag tags may be purchased for \$2.00 from designated commercial outlets or Collection contractors. The tags will be sold by the Regional District at cost less 10% commission.

Net revenue from additional bag tag sales will be deposited in the Recycling Reserve.

**2) RECYCLABLE MATERIAL LIST**

The following materials will be prepared for recycling by ISWAC:

- general white goods
- special white goods
- auto hulks
- tires
- paint
- lead acid batteries

ISWAC will encourage recycling efforts for the following materials:

- newsprint
- office paper (white and coloured ledger, computer)
- corrugated cardboard
- aluminum and tin cans
- glass

APPENDIX I8  
ISLANDS SYSTEM BUDGET - 1995

## ISLANDS WASTE MANAGEMENT : 1995 BUDGET

(DISTRIBUTED AT STAGE 3 PUBLIC MEETINGS)  
(PRIOR TO RECEIPT OF CONTRACT PRICES)

<u>EXPENDITURES:</u>	<u>Capital Cost</u>	<u>Annual Cost</u>		
Debt Service				
Landfill	\$156,750	\$16,938	Interest Rate	Term
Transfer Stations	\$90,000	\$9,725		
Landfill Purchase	\$41,180	\$4,450	9.75%	25
	\$287,930	\$31,113		
Closure Reserve		<u>\$12,518</u>		
	Capital	\$43,631		
Landfill Operating Cost		\$148,000	<i>From Gartner-Lee- Contractors will bid</i>	
Collection Contracts		\$140,000	<i>From Stage 2- Contractors will bid</i>	
Haulage Contracts		\$142,000	<i>From Stage 2- Contractors will bid</i>	
Administration		\$15,000	<i>For fee collection &amp; bookkeeping</i>	
Bag Tag Costs		\$5,000		
Waste Coordinator		\$30,000		
Autohulk Disposal		\$20,000	<i>* Initial Cleanup of backlog</i>	
Recycling, Composting		<u>\$12,000</u>		
	Operating	\$512,000		
Contingency	5.00%	<u>\$27,782</u>		
	Total	<b>\$583,412</b>		

### REVENUES:

Grant-in-lieu of taxes		\$2,000	Tax per \$1000 assessment
Taxation		\$33,009	\$0.16
Transfer from Skidegate		\$44,501	
Transfer from Old Massett		\$59,968	
Special Waste Charges		\$12,000	
Provincial Grant		\$10,000	<i>* for autohulk cleanup</i>
General Refuse Charges		\$40,000	
Bag Tags		\$15,000	Monthly Unit Charge
Landfill Unit Charges	1540	\$143,340	\$7.76
Haulage Unit Charges	1540	\$112,590	\$6.09
Collection Unit Charges	1540	<u>\$111,005</u>	<u>\$6.01</u>
	Total	<b>\$583,412</b>	<b>\$19.86</b>

### DRAFT:

**ALL FIGURES +/-30%**

11/09/94



## APPENDIX I 9: ACKNOWLEDGEMENT

The Islands Waste Management Plan was developed by community representatives, volunteers and government staff.

The following is a list of people who contributed time and ideas at the many Islands Advisory Committee meetings:

Elio Azzara - QCC/SLAPC  
Liz Baker - Parks Canada  
Glen Beachy - Port Clements  
Mark Beecroft - Fletcher Challenge  
John Bennett - Old Massett Band  
Janice Botel - Sandspit Recycling  
Michelle Botel - Sandspit Recycling  
Mike Brown - GIAPC  
Bob Crossman - Parks Canada  
Jane Dobree - Big Red Enterprises  
John Doucette - MacMillan Bloedel  
Dutes Dutheil - GIAPC  
Marie Ernst - MIAPC  
Ama Gajda - Sandspit Recycling  
Wade Goeson - Port Clements  
Judy Hadley - Village of Port Clements  
Eddie Hans - Skidegate  
David Hart - Village of Masset  
Jim Henry - Hecate Junk-it, MIAPC  
Rob Hitchcock - Port Clements

Brian Hornidge -Port Clements  
Gerry Johnston - GIAPC, Port Clements  
John Kay - MIAPC  
Gary Lawson - Fletcher Challenge  
Grant Mathiesen - QCC Garbage Pick-up  
Bill Mckay - Director, Area D  
Gilbert Parnell - Skidegate  
Dave Parnum - Care Masset  
Bill Pendergast - Care Masset  
Don Plumb, Queen Charlotte  
Fran Redick - Masset  
Barb Rich - QCC/SLAPC  
Jaques Robichaud - QCC Recycling  
Winston Shave -QCC Garbage Pick-up  
Eric Slack - Masset  
Sam Stanko - McMillan Bloedel  
Bob Stratton - MIAPC  
Pete Thompson - QCI Garbage Collection  
Sue Wells - Thrift Shop  
Greg Wiggins - QCC/SLAPC  
Ron Williams - Skidegate Band  
Ray Zimmerman - MacMillan Bloedel

The following B.C. Environment and Regional District Staff also contributed to the plan development:

Greg Fletcher - Regional District Planner  
Janet Beil - Regional District  
Brigid Cummings - ILSWAC  
Carol Nelson-Smith - ILSWAC

Mark Ho - Regional District  
Frazer Mckenzie - B.C. Environment  
Ed Rottmiller - B.C. Environment  
Bryce Barnewall - Regional District

David Forgie & Janice Voss of Associated Engineering prepared Stage 1 & 2 of the plan. Tony Sperling and Mike Budzik of Gartner - Lee Ltd. prepared the Landfill filling plan.



## **MEETINGS**

After Stage 1 was completed, meeting locations alternated between Port Clements and Queen Charlotte/Skidegate. Meetings were advertised and open to the public.

### **Committee**

#### **Stage 1**

April 17, 1991  
May 29, 1991  
June 12, 1991  
August 21, 1991  
November 5, 1991  
April 1, 1992

#### **Stage 2**

June 18, 1992  
September 22, 1992  
November 17, 1992  
February 10, 1993  
April 22, 1993  
June 3, 1993  
June 22, 1993  
September 22, 1993  
October 7, 1993

#### **Stage 3**

January, 1994  
April 21, 1994  
March 30, 1994  
May 4, 1994  
June 23, 1994  
July 13, 1994  
July 21, 1994  
August 18, 1994  
October 20, 1994

Many people attended various public meetings to make suggestions and comments about the waste management plan. Meetings were held as follows:

### **PUBLIC**

#### **Stage 1**

Nov 9, 91- Skidegate  
May 6, 92-Port Clements

#### **Stage 2**

June 22, 1993 - Sandspit  
June 22, 1993 - Queen Charlotte  
June 23, 1993 - Port Clements  
June 23, 1993 - Masset  
November 8, 1993- Sandspit  
November 9, 1993 - Queen Charlotte  
November 10, 1993 - Masset

#### **Stage 3**

September 26, 1994 - Sandspit  
September 27, 1994 - QCC  
September 28, 1994 - Masset