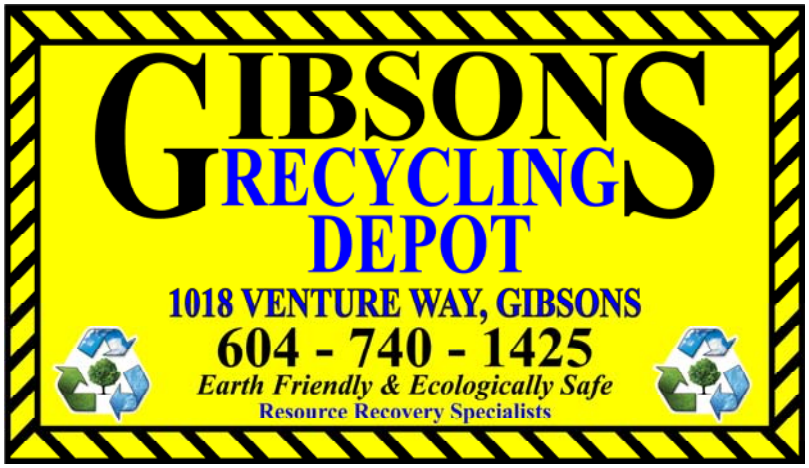

Proposed Next Generation
Resource Recovery Park in Gibsons, B.C.

Moving From "Waste Management" to True "Resource Recovery".

A First Step Toward a Zero Waste Solution.

Eliminating, not just Managing Waste.

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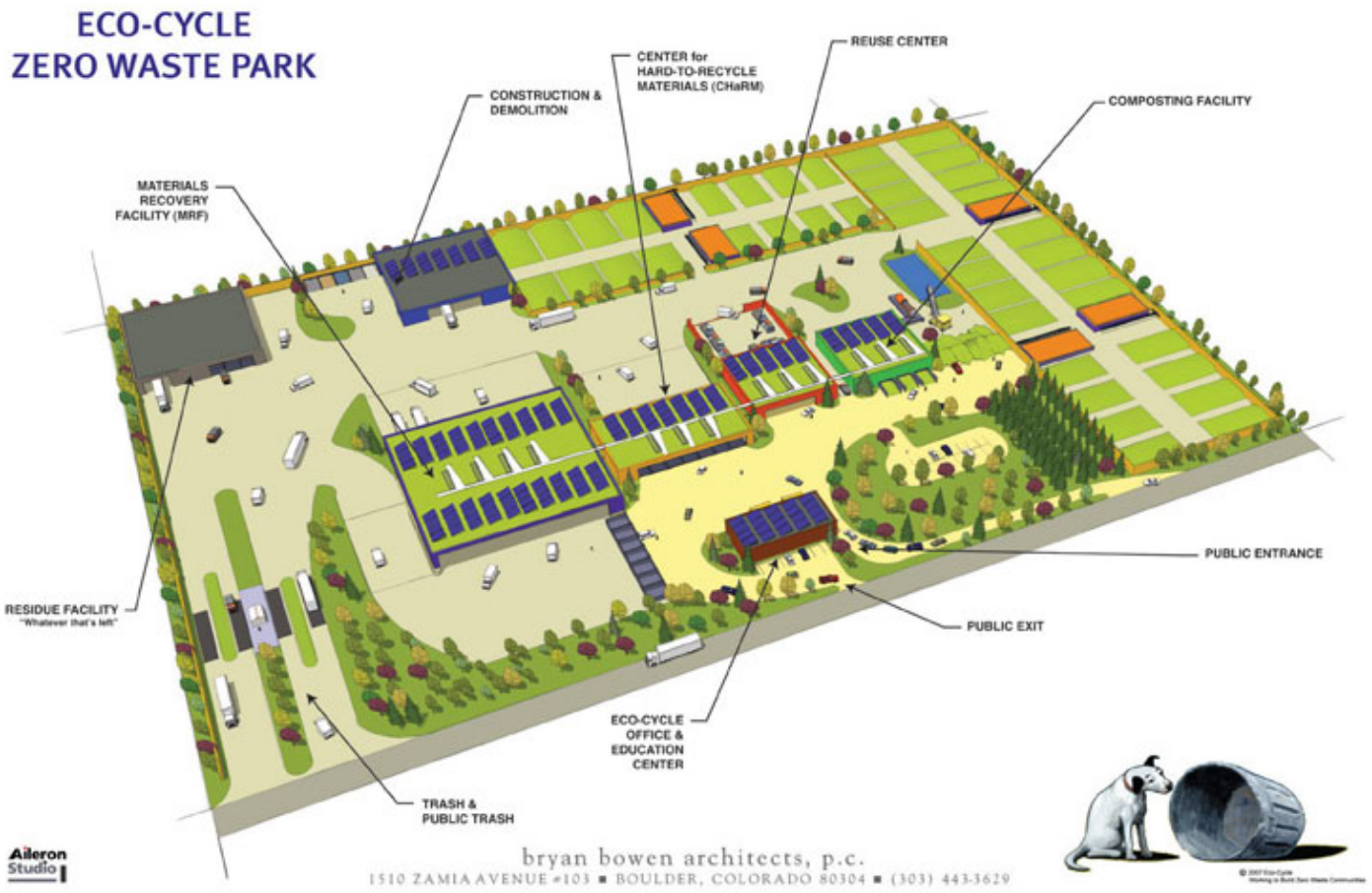
Below – Idealized Resource Recovery Park

Key Elements:

- Materials recovery system.
- Re-use center in conjunction with local business.
- Recycling.
- Composting.
- Education center.



HIGHLIGHTS

- Gibsons Recycling – is the first and largest non-government funded resource recovery park in B.C. An increasing number of items are accepted at the facility (see p. 1). Gibsons Recycling is highly active in B.C.'s *Extended Producer Responsibility* (EPR) Program, is an active member of the *Zero Waste International Alliance* (www.zwia.org), and is a long time member of the *Recycling Council of B.C.*). Management is ❶ deeply committed to a zero waste solution, ❷ knowledgeable, ❸ motivated, and ❹ has the entrepreneurial skills to make a state-of-the-art Resource Recovery Park a success.

- Over time, modern society has developed what can be described as cheap, transportation-based "Integrated Waste Management" systems. This has not worked as the long term (and now short term) costs become more and more obvious. Shipping increasing waste and recyclables overseas for processing is not only expensive it exports jobs and stifles innovation and new age technologies.

- Zero waste is a whole system approach to addressing these problems. Zero waste:
  - Saves money.
  - Leads to innovation and creates jobs.
  - Involves far less transportation.
  - Solves landfill problems.

- Zero waste is becoming truly mainstream as new technologies are created that can be utilized on a small scale.

- On the Sunshine Coast, options for recycling, garbage collection, landfill use etc. are in the process of being decided for the long term. Now is the time to introduce the idea of true zero waste and the idea of a resource recovery park and all its benefits.

- A Resource Recovery Park is the first step that:
  - Changes behaviors through actual practice.
  - Is an ideal location to house an education center for residents, school children, and other visitors.
  - Generates local employment and innovation.
  - Begins the transition from simply transporting waste and recyclables to true zero waste / resource recovery.

- In Gibsons, aside from Gibsons Recycling, the current drop off depot at a mall represents a simple drop off point and all material is trucked in loose form to Sechelt, a highly inefficient, costly, and environmentally unfriendly system. Contamination rates are high.

- Gibsons Recycling is an ideal location to place a Resource Recovery Center.
  - Excellent central location in Upper Gibsons to serve the entire surrounding region.
  - 2.5 acre owned land with zoning.
  - Existing infrastructure and critical mass.
  - Management.

It is proposed that a new pilot Resource Recovery Park be devised and implemented by Gibsons Recycling in conjunction with B.C.'s Ministry of Environment as a demonstration project for the entire Province of British Columbia.

I. Gibsons Recylcing

Background of Gibsons Recycling. Buddy Boyd, owner of Gibsons Recycling Depot, first became an environmentalist as a teenager on the streets of Montreal in 1970. That year, the Bank of Montreal started a program called the BMO Youth Project, designed to provide structure, build self-esteem and help kids find their passion. At 17, Buddy launched a chapter of "*STOP*", the Society to Overcome Pollution. That was followed by "*Tidy Tim*", a successful recycling and cleanup program he started at Montreal's Dawson College in 1976 to clean up the campus.

Over time, Buddy has been involved in a number of ventures including construction, sawmilling, trucking, and the disposal business (Smithrite).

In 2003, Gibsons Recycling was born, taking over existing recycling depot operations in Gibsons, Wilson Creek, and Sechelt after the existing operator folded. This was funded by the Sunshine Coast Regional District (SCRD). In 2004, the SCRD decided to operate this program internally, dropping Gibsons Recycling as contractor. At this point, in 2004 Gibsons Recycling purchased its existing property and very quickly ramped up operations to collect a broad range of recyclable products. These included:

No fee charged.	For a small fee.
o Cardboard o Mixed papers o Newsprint o Plastics o Automotive Batteries o Cell Phones & Cell Phone Batteries o Ink Jet Cartridges o Metal o E-Waste and T.V's o Paint o Rechargeable Batteries	o Styrofoam o Tires o Alkaline Batteries. o Appliances o Construction wood waste. o Drywall o Roofing o Scrap metal.

The Gibsons Recycling 2.5 acre facility, centrally located in upper Gibsons.

In addition,

- **Unmarked wine bottles** are collected for the *Bottle Me Program*, an employment program for Sunshine Coast Residents with developmental disabilities.
- Gibsons Recycling collects **books** and other Reusable items for fund-raising events to benefit *Happy Cat Haven*, *Gibsons Wildlife Rescue* and *Gibsons and Cedargrove Elementary Schools*. Gibsons Recycling also promotes literacy by distributing books to children when they come in with their parents to Recycle.
- **Egg cartons** are given to local farmers for re-use.
- **Cell phones** and **ink cartridges** are collected for *Think food*, which remanufactures these products and then sells them.

More recently, Gibsons Recycling has become part of Product Care and Encorp's ***Product Stewardship Programs***, including:

- **Electronics** (computers & Computer Accessories)
- **Paint**

Gibsons Recycling also recently instituted some important new resource recovery programs.

- **Styrofoam recycling – first in B.C.** In the summer of 2009, Gibsons Recycling purchased a new styrofoam recycling machine (retail cost $34,000 U.S.), the first for a recycling depot in B.C. This machine converts styrofoam in to a much smaller resin product which is sold back to an American contractor and reused to make high-end crown molding, photo frames, and bike helmet insulations, among other things. To date, Gibsons Recycling has converted approximately 14 semi trailer loads of Styrofoam into less than 3 pallets of a marketable resin product.
- Resource Recovery through the "**Zero waste, re-use Store**". Gibsons Recycling salvages items that have been discarded into the waste stream (i.e. destined for the landfill and picked up by Gibsons Disposal, the sister operation to Gibsons Recycling) and sells them

Current research and other efforts are occurring in other areas.

- **Mattress recycling** – deconstruction into various recyclable / re-usable components (metal, wood, textile, etc.).
  - The average mattress weighs 100lbs and is 19 cubic feet.
  - Mattresses can not be compacted into the landfill but instead must be buried separately in a "mass grave" -It can be disassembled manually an about 4 min
  - The average mattress contains 40lbs metal, 10lbs polyurethane. Other contents include coconut fibers, cotton, felt, wood and cardboard. All this can be recycled.
  - Every day there are an estimated 450 mattresses dumped in Metro Vancouver (G.V.R.D) transfer stations.
- **Plastics recycling** – the current "bottom end" of the plastics spectrum is now not being recycled but thrown away in landfills. New processes are capable of *converting this plastic waste into a saleable alternate fuel* with the added benefit of zero emissions into the atmosphere. The alternate fuel produced through this system meets current standards of #2 diesel fuel sold in the marketplace today.
- **Glass** – investigating the possibility of obtaining a glass crusher and working with various entrepreneurs to create value-added products. In addition, glass-melting kilns are being investigated as another way to convert glass to new products.
- Reclamation of wood construction waste for resue.

Other Businesses and Activities. Sister operations of Gibsons Recycling include a *disposal business* (Gibsons Disposal), a *storage business and storage containers*, as well as operation of an all-terrain 6x6 Crane Truck and disposal and rubbish removal services.

The businesses also offer a disposal / recycling pick up service, whereby the Gibsons Recycling team will go to a home, business or construction site and take materials away for processing / recycling / waste management.

Employment. Gibsons Recycling and its sister businesses employs 7 – 8 people on a full time and part time basis. Three of these positions are given to people with special needs.

The reality is that Gibsons Recycling has built the first resource recovery park in BC without any government funding. It accepts a much broader range of products than does the government funded depot system – at no cost to the taxpayer. Gibsons Recycling is in an ideal position to launch a new pilot Resource Recovery Park as part of a zero waste strategy – ❶ there is no processing facility in the Gibsons area for recycled material – recycled material is trucked in loose form out of town in a highly inefficient and expensive system, ❷ significant (owned) acreage, ❸ central location in Gibsons, and ❹ motivated and knowledgeable management.

Mission. The mission of Gibsons Recycling is to build recovery and recycling programs that:

1. Create local jobs and opportunities to use our discards as resources
2. Raise community awareness
3. Advocates zero waste
4. Offer training and jobs to individuals with special needs
5. Donate salvaged materials to charities for fund raising
6. Create a community recycling centre where children and adults learn to be responsible environmental stewards
7. Have an ever expanding list of materials recycled, reclaimed and removed from the waste stream

8. Invest in and promote sustainable innovations for reducing waste
9. Implement innovative landfill diversion techniques
10. Incorporate socially responsible business practices

Gibsons Recycling (Buddy and Barb) is a member of ZWIA (*Zero Waste International Alliance*, www.zwia.org). Buddy and Barb are also members of several committees of B.C.'s *Extended Producer Responsibility* program. They attend as many workshops, seminars, and conferences as possible. They are also long time members of the RCBC (*Recycling Council of B.C.*).

II. Why Pursue a Zero Waste Initiative ?

Practices to Date. Over time Nature has devised a system where waste from one organism becomes resources for others, creating cyclical material flows in a state of constant equilibrium and balance. Highly sensitive feedback systems ensure that whenever wastes (used resources) begin to accumulate, the opportunities to utilise them are quickly taken up by other organisms to build more abundance and common wealth.

However mankind has been rapidly destroying the very system that sustains us. One-way, linear material flows have continued to deplete finite resources while taking Nature's capacity to absorb waste for granted and treating earth as an enormous sink for ever increasing volumes of waste.

We have invested so heavily in waste disposal and the supply chain system that feeds it, that attempts to change it over the past 30 years have made little impact.

Municipalities have continued to build better and bigger systems to cope with ever increasing flows of waste. They have tended to see recycling as an activity that had popular appeal but not as a serious core option to landfilling. Their view was encouraged and supported by the powerful international waste industry that has gradually consolidated and gained control of an increasingly valuable waste stream.

Over the past 50 years there has been little change in the way waste is contained, collected, transported and delivered for disposal at landfills. Emphasis has traditionally been placed on health issues and improved cost-efficiency of collection systems, rather than the recovery of materials for re-use or recycling.

The idea of "managing" waste has not solved the problem, and the hidden long term (and now short term) cost of waste are becoming more evident as waste accumulates. In the final analysis landfills destroy valuable resources.

The whole idea of "***Integrated Waste Management***" has served to maintain the interests of the dominant players, industries that want society to be responsible for their waste outputs, for example the packaging industry - and those that profit from burying waste, the waste industry. ***The export of massive volumes of recyclable material offshore to China is nothing short of exporting potential new jobs in a new zero waste economy***. Few would disagree that various agendas have brought us to the point of crisis that we now face and denial of alternatives. Society increasingly is demanding real change. The cost of waste disposal has increased appreciably in recent years and has forced communities to review the present one-way system of production, consumption and disposal.

Increasingly, there is no such thing as cheap waste disposal and a paradigm shift is not only advisable, it is necessary. The final goal for a sustainable society is to create a 100% materials-efficient economy – based on the same principles that Nature has successfully proven for millions of years.

What a Zero Waste Solution Really Is. Zero Waste is a whole-system approach to addressing the problem of society's unsustainable resource flows. Zero Waste encompasses waste elimination at source through product design and producer responsibility, and waste reduction strategies further down the supply chain such as Cleaner Production, product dismantling, recycling, re-use and composting. Communities that implement Zero Waste strategies are aiming to switch from wasteful and damaging waste disposal methods to value-added resource recovery systems that will help build sustainable local economies. As such Zero Waste is in complete opposition to landfilling and incineration.

Zero Waste:

- Aims to eliminate rather than just "manage" waste.
- Is a whole system approach that aims to completely change the way materials flow through society - resulting in NO WASTE.
- Is both an end of pipe solution which encourages waste diversion through recycling and resource recovery, and a guiding design philosophy for eliminating waste at source and at all points down the supply chain.
- Is a unifying concept or "brand" for a basket of existing and emerging technologies aimed at the elimination of waste.
- Resets the compass with new tools and new ways of thinking so that normal, everyday activities contribute to the answer rather than the problem.
- Is a way to transform the current cost-plus waste industry - whose existence is dependent on the destruction of more and more resources, into a value-added resource recovery industry.
- Redesigns the current, one-way industrial system into a cyclical system modelled on Nature's successful strategies.
- Helps communities develop local economies, sustain good jobs, and provide a measure of selfsufficiency.
- Reduces consumption and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace.
- Is a powerful new concept that enables us to challenge old ways of thinking and inspires new attitudes and behaviour - the hallmarks of a breakthrough strategy.
- Is a competing waste disposal option to landfilling (and incineration) and is consistently showing to be a more economically viable option.

A zero waste solution is efficient, it creates value, and it creates new employment opportunities.

To implement this, there are several important steps that must be taken.

- Engaging the psyche.
- Involves a call to action.
- Has concrete goals.

- Predicts and redesigns the future.
- Creates a climate of continual improvement.
- Engages local entrepreneurs to involve them in the various areas of re-use / recycling (i.e. glass, various types of plastics, etc.).

A Sunshine Coast Solution. A zero waste strategy can be implemented on the Sunshine Coast. To build recognition and change public perception, it is proposed that a pilot project, Next Generation Resource Recovery Park be established at the existing Gibsons Recycling Facility in Gibsons.

- New technologies are constantly emerging which reduce the required scale of operations for important
- Gibsons Recycling is at the forefront of all these developments and is committed to a zero waste strategy. New technologies are being investigated and new relationships are being cultivated continually.
- There is now nothing in the Gibsons area aside from a depot system that collects loose recyclables and transports them to Sechelt in an inefficient, costly, and environmentally unfriendly way.
- The existing Gibsons Recycling facility is in an ideal location with appropriate zoning.
- The existing 2.5 acre Gibsons Recycling facility could easily be modified and expanded as necessary.
- The Gibsons facility could easily lend itself to tie in to any future curbside service (rather than trucking to Sechelt).

The Sunshine Coast is now considering options for recycling, garbage collection, and landfill issues for the long term at this time. The concept of a next generation resource recovery park needs to be introduced as part of such a long term solution.

III. What the Resource Recovery Park Entails

A Resource Recovery Park is dedicated to separating, reprocessing and value-adding materials. Key elements include:

- Materials recovery system.
- Re-use center in collocated with local business / new sunrise businesses. The outputs from one process would be used as the inputs to other manufacturing or value-adding processes.
- Recycling.
- Composting Unit.
- An education center which providing seminar facilities and tours for schools, industry and other groups, will help change people's perception from waste to resources. Workshops and cottage industries could also be located on these estates to provide business opportunities for innovative solutions to resource recovery and value-adding.

[note – see idealized rendition on p. 2].

A Resource Recovery Park is an excellent first step in a zero waste strategy. Why ?

- Actual Practice. It represents a central community asset that can actually be used. It is not just a piece of paper, or a report or book, or a newspaper ad to educate. It is a convenient place where people can go with their recyclable, organic waste, and other useful materials. ***It changes actual behaviors***.
- Education. A Resource Recovery Park is an ideal location to house an education center for the public and schools. For a zero waste strategy to work, a paradigm shift in thinking is necessary and the resource recovery park represents an ideal setting for this to happen.
- It can be combined with various community Information programs aimed at raising awareness.
- It sponsors new local economic development and partnering opportunities.
- It represents a shift away from a government run / sponsored simple transportation system that simply moves waste around.
- It actually helps to build eco-tourism and community pride which can be rolled out throughout the Province.

Subsequent steps in a zero waste strategy might include:

- Reducing the allowable size of the residual rubbish bag.
- Less frequent curbside pickup of waste destined for the landfill.
- New curbside pickup system, which includes a 3-bag collection system for household residents – one for recyclables, one for organics and one for residual waste.

  Ultimately, moving toward a private user pay curbside pick up program for those who can't or don't want to drive to the RRP. The rationale here is to make it less easy for people to consume and discard, transferring responsibility to the individual for decisions regarding their waste, while funding systems that convert “garbage” to new products.
- Creation of a resource exchange network that matches the unwanted outputs from one process with the needs for such resources in other activities (i.e. along with an resource exchange network).

Ultimately, Resource Recovery Parks should be established in each main township / region. This is an ideal model for rural and spread out communities in BC

Gibsons Recycling has the infrastructure, the talent, and the motivation to create an excellent pilot resource recovery park for the Gibsons area. Gibsons Recycling would like to seek ways of partnering with the Ministry of Environment to develop an early stage pilot project.