



MORRISON HERSHFIELD

*People • Culture • Capabilities*

# SOLID WASTE SOLUTIONS That Make a Difference





# Why choose Morrison Hershfield?

**OUR CLIENTS BENEFIT** from a well-organized nimble team with local presence backed by over 1000 staff in 24 offices across North America and beyond; ensuring your project is delivered according to your vision, schedule and requirements.

- ▶ **CLIENT-FOCUSED** - Over 90% of our business comes from recurring clients. We are proud to maintain an “excellent” rating in our customer satisfaction program. Ultimately, our role is to listen to you, help you solve problems and guide your organization.
- ▶ **INVESTED** - Our employee-owned business culture allows us to attract and retain the best talent who are invested in the success of our clients’ projects.
- ▶ **KNOWLEDGEABLE** - Our team strives to develop a sound understanding of the technical aspects of every problem to develop appropriate solutions. Key to developing these solutions is gaining an understanding of your unique needs and objectives.
- ▶ **DEPTH** - Our core solid waste team covers all aspects of waste management, from planning through to design and construction quality assurance. We are backed up by a multi-disciplinary team of engineers, planners, environmental compliance specialists and project partners.
- ▶ **ONE SIZE DOES NOT FIT ALL** - Our solid waste team knows that every community, large and small, has its own issues and challenges, and its own way of viewing potential solutions. It is important that we help communities solve their unique problems rather than let predefined solutions drive our work.

Make us your first call.

*“We have worked with Morrison Hershfield on several solid waste studies, designs, projects and initiatives over the past several years. I consider them to be experts in this field with in-depth knowledge of the solid waste management landscape. Their staff is knowledgeable and responsive, providing outstanding support towards improved performance and protection of the environment.”*

*-Regional Government Client*



CLIENT SOLUTION PROVIDERS



PROBLEM SOLVERS



PARTNERS WITH OUR CLIENTS

## PROJECT TYPES

- Landfills
- Organic Waste Transfer and Processing
- Recycling and Waste Drop-off
- Resource Recovery
- Transfer Stations
- Waste, Recycling and Organics Collection

## SERVICES

- Circular Economy and Waste Reduction
- Cost and Financial Modeling
- Environmental Monitoring
- Feasibility Studies
- Landfill Design
- Permitting, Approvals and Compliance
- Solid Waste Facility Design
- Technology Reviews
- Waste Management Plans

## ENGINEERING

- Civil & Land Development
- Code & Life Safety
- Electrical
- Environmental
- Fire Protection
- Mechanical
- Structural
- Transportation





# UNITED BOULEVARD WASTE AND RECYCLING CENTRE

Coquitlam, BC



**DESIGN,  
CONSTRUCTION  
AND QA**

**FLAGSHIP  
TRANSFER  
STATION**

**600  
TONNES OF WASTE  
PER DAY**

**ON TOP OF OLD  
COQUITLAM  
LANDFILL**

Metro Vancouver's new flagship transfer station offers both residential recycling and garbage drop-off for self-haul customers and large vehicle commercial and municipal garbage transfer. Morrison Hershfield has led a team of engineers to deliver this important project and has provided the programming, design and construction administration for the unique transfer station project, constructed on top of an existing landfill. Unique considerations include landfill gas management, conforming with landfill closure requirements and differential settlement.



# ORGANICS PROCESSING IMPLEMENTATION

Terrace, BC



FEASIBILITY STUDY,  
DESIGN AND  
CONSTRUCTION  
QA/QC

**4,000**  
TONNES PER YEAR  
OF ORGANICS

SOLID WASTE  
FACILITIES  
ENGINEERING

ORGANICS  
DIVERSION

As part of the process of updating regional solid waste management plans, the community wanted to determine appropriate technologies, approaches and costs for a new composting facility. Morrison Hershfield conducted a feasibility study with detailed cost and revenue models to evaluate different planning scenarios for the project. Once the facility technology was selected, Morrison Hershfield participated as part of the design-build team responsible for the detailed design and construction QA/QC. The team designed a composting facility that uses the GORE™ cover system capable of processing 4,000 tonnes of organic material per year.



# ECONOMIC DECISION-MAKING MODELS

Courtenay, BC



**BUSINESS CASE  
ANALYSIS**

**COST & REVENUE  
MODELING**

**LONG-TERM  
PLANNING**

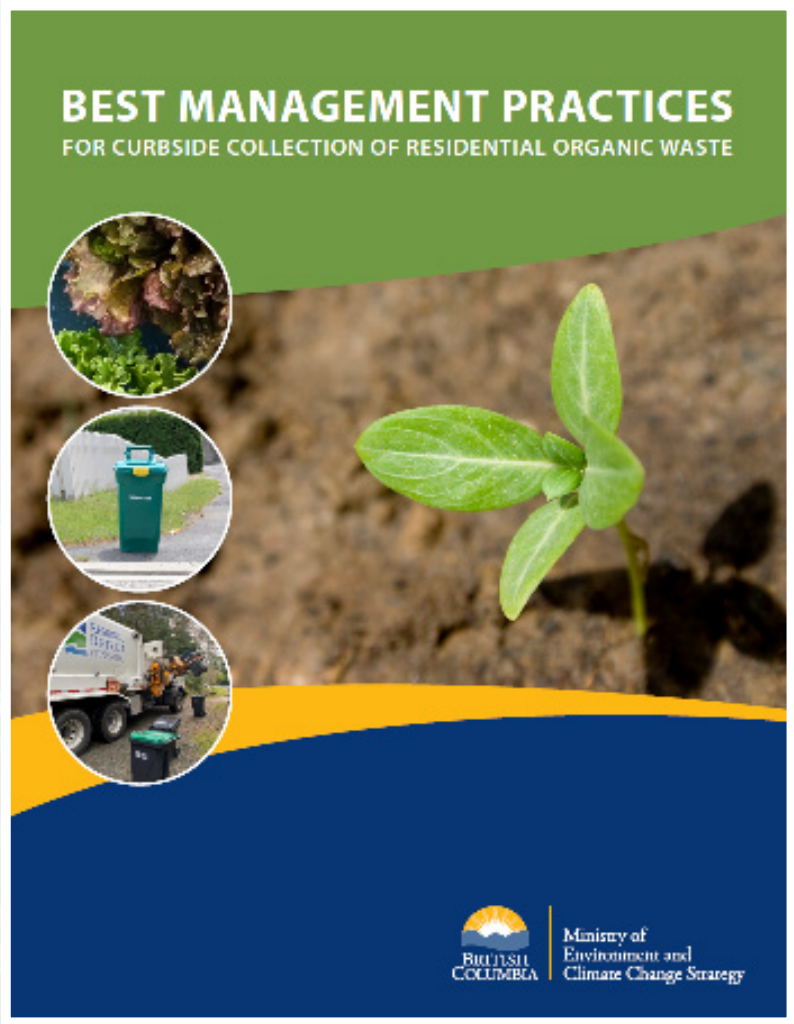
**SIMPLIFIED  
DECISION-MAKING**

Business case analyses were completed involving an assessment of capital and operating costs for the infrastructure in various waste management scenarios. In two separate studies, scenarios included transfer stations, organics management facilities and waste-to-energy facilities. Long term cost models were developed to determine an overall cost per tonne for each scenario. These studies have been key to making long term decisions for facilities, technologies and potential locations in the region.



# ORGANIC WASTE MANAGEMENT PRACTICES

## Ministry of Environment and Climate Change Strategy, BC



40%

ORGANIC MATERIAL  
CURRENTLY SENT  
TO LANDFILL

RESIDENTIAL  
ORGANIC WASTE  
CURBSIDE  
COLLECTION

SUPPORTS  
A CIRCULAR  
ECONOMY

REDUCE GHG  
EMISSIONS

In BC, organic waste typically represents 40% of material that gets sent to landfills and generates a significant amount of greenhouse gases. Morrison Hershfield developed best management practices for the BC Ministry of Environment to guide the design, implementation, and operation of residential organic waste curbside collection programs across the province. The guide considers all aspects of the organics management to support a circular economy and a sustainable system for diverting organic waste from landfills and to reduce GHG emissions.



# BIGSTONE LANDFILL SITING & DESIGN

Wabasca, AB



**SITING, DESIGN &  
CONSTRUCTION**

**INDIGENOUS  
SERVICES CANADA**

**CLASS II LANDFILL  
& RECYCLING  
DROPOFF**

**ENVIRONMENTAL  
ASSESSMENT**

As the prime engineering consultant for this new First Nations solid waste facility, Morrison Hershfield designed all infrastructure including the road network, landscaping, earthworks, stormwater management, electrical distribution, leachate management system and a Class II landfill cell. Morrison Hershfield also completed an Environmental Review under the Canadian Environmental Assessment Act as part of this project and offered value-added solutions to the client by allowing quick design iterations at minimal cost and developing a simplified operations manual tailored to Bigstone Cree Nation's available resources.



# EXTENDED PRODUCER RESPONSIBILITY PROGRAMS

Ministry of Environment and Climate Change Strategy, BC



EXTENDED  
PRODUCER  
RESPONSIBILITY  
PROGRAMS

3  
CONSECUTIVE  
STUDIES

RECYCLING  
REGULATION

ECONOMIC &  
ENVIRONMENTAL  
IMPACTS

The Ministry of Environment and Climate Change Strategy and Metro Vancouver wanted to assess the economic and environmental impacts of Extended Producer Responsibility (EPR) programs, as well as potential new EPR programs in BC. The studies included assessment of benefits, research into recycling methods and waste diversion estimates for EPR products such as mattresses, bulky furniture, textiles, carpets and construction and demolition waste. The assessments identified greenhouse gas benefits, waste diversion, job creation/loss and municipal costs which were used to illustrate the overall impacts of the programs to British Columbians.



# REPOSITIONING STUDY

## Vancouver, BC



- FEASIBILITY  
STUDY
- EMERGING  
TECHNOLOGIES  
REVIEW
- WASTE FLOW  
MODELING
- ZERO WASTE  
PLANNING

The City of Vancouver is focused on achieving Zero Waste by 2040. The City engaged Morrison Hershfield to provide expertise in a variety of technical areas relating to waste prevention, diversion and management, with a focus on technology approaches for achieving zero waste. One of the many outcomes of this study is a shortlist of combinations of technologies that could move the City closer to its Zero Waste goals. The technologies and combinations of technologies were assessed according to essential and desirable criteria. Desirable criteria included overall contribution to waste diversion, “good neighbour” potential, economic / social benefits and contribution to a local, circular economy.



# FOUNDED on technical excellence and ethics.

**OUR RICH HISTORY** of diverse projects provide exposure to emerging trends in process and design technologies spanning different industry sectors, keeping us ahead of the curve. We regularly adapt and integrate these technologies into solutions for our clients. **Our passion to design and build our projects right the first time is recognized throughout the industry and in our communities.**



▲ Platinum Elite Status: A key player in ReNew Canada’s list of top 100 Infrastructure Projects for Canada in 2021 with involvement in 23 of the 100 biggest public sector infrastructure projects under development in the Country.



75+

Years in Business  
Serving Canada

1000+

Number of Full Time,  
In-house Employees

100%

Employee Ownership

90%

Annual Revenue from  
Repeat Clients

24

Offices Across  
North America and India

**WE ARE A MARKET LEADING** engineering firm delivering innovative, cost effective and technically sophisticated solutions for both horizontal and vertical infrastructure. We are anchored by highly responsive technical experts, thought leaders and high performing employees across North America. Our highly focused approach to the clients and markets we serve ensures that we deliver the value our clients demand.

When our founders established this consulting practice in 1946, they set the highest standards of ethics, technical excellence and customer service. These high standards have become the hallmark of Morrison Hershfield. We continue to be guided by our values of integrity, accountability and mutual respect, and believe in continuous improvement, quality and teamwork.





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