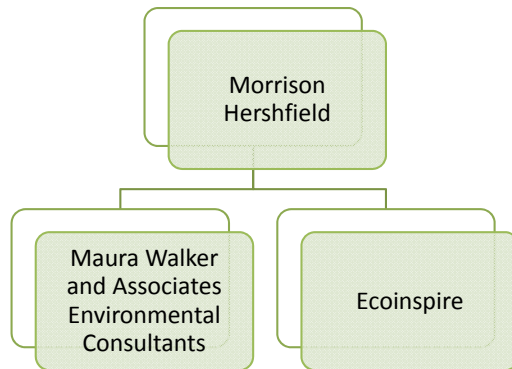


Consulting Team: The Firms



1



Todd Baker, P.Eng.

- Over 17 years of experience
 - Residual waste management
 - Landfill design
 - Organics management
 - Costing and GHG emissions
- Involved recently in Comox Valley and Capital Regional District SWMPs
- Project role: project manager, residual waste management options and plan preparation



2



Konrad Fichtner, P.Eng.

- Over 30 years of experience
 - Resource and energy recovery
 - Solid waste planning
 - Organics management
- Currently project manager for Capital Regional District SWMP
- Project role: resource recovery and residual waste management options



3



Maura Walker

- Solid waste management planner for 25 years
 - 9 years in local government
- Solid waste management plans:

• Regional District of Nanaimo • Powell River Regional District • Squamish-Lillooet Regional District • Regional District of Fraser-Fort George • Comox and Strathcona Regional Districts	• Regional District of Okanagan Similkameen • Alberni-Clayoquot Regional District • Capital Regional District • Grande Prairie, AB • Kolkata, India • Brunei Darussalam
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- Maura's role: facilitate consultation process, provide technical insight, prepare plan documents



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ENVIRONMENTAL CONSULTANTS

Carey McIver

- Recently retired Manager of Solid Waste for the Regional District of Nanaimo
 - Over twenty years of experience designing, delivering, and evaluating plans, policies, programs and facilities for waste diversion, recovery and disposal
 - Credits the implementation of their solid waste management plan with achieving 70% waste diversion
 - Highly regarded speaker and facilitator
- Carey's role: community consultation, technical evaluation of options



Sue Maxwell

- Zero waste consultant -7 years
 - Masters in Environment and Management, thesis on zero waste
- Waste planning and programs:
 - Product Care –paint, flammable liquids, pesticides
 - Stewardship Ontario –municipal hazardous and special waste
 - BC Light Recycle program –phase 1 & 2
 - BC Small Appliances program –phase 1
 - Resort Municipality of Whistler –zero waste strategy
 - BC Large Appliances –system study
- Sue's role: Research on existing system, provide technical insight (EPR), prepare Stage 1 report



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SOLID WASTE MANAGEMENT PLANNING 101



Solid Waste Management Planning 101

- Solid Waste Management Plans (SWMP) prepared by Regional Districts are required by the Province
- Regional planning for infrastructure and services
- Covers all aspects of solid waste management (collection, waste reduction, disposal, financing, education, etc.)



Solid Waste Management Planning 101

- The Plan is a comprehensive guide for the next 10 years with a vision for the next 20-30 years



Solid Waste Management Planning Process

- Conducted in 3 stages
- Has a concurrent public consultation process
 - Advisory committee(s)
 - General public consultation



Stage One

- Establish Technical and Public Advisory Committee(s)
- Conduct a Review of current system
 - Review of technical reports
 - Site visits and phone calls
 - Internet research
 - Assessment of the existing solid waste management system
 - Identify successes, challenges and opportunities associated with the current waste management system
 - Stage 1 Report

Stage Two



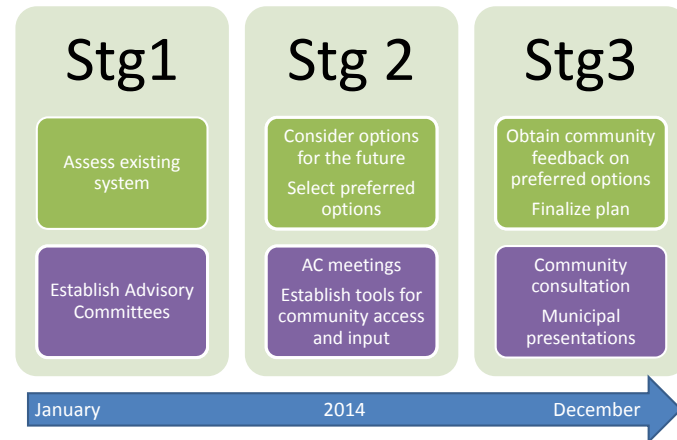
- Identify potential options (long list)
 - Review of options by Advisory Committee
- Select preferred options (shortlist)
 - Consideration of issues raised in Stage 1 and the vision for SLRD's future solid waste management system
- Technical assessment of options (draft plan)
 - Review of assessment by Advisory Committee

Stage Three

- Community consultation process to obtain input into selected options
- Results of consultation reviewed with Advisory Committees
- Finalize content of Plan
- Approval by Board
- Submission of Plan to Minister of the Environment



The Planning Process



Thank you.

Questions? Comments?

Visioning the Future

...to help establish common goals for this plan
...to assist in the process of determining what we want and how to get there

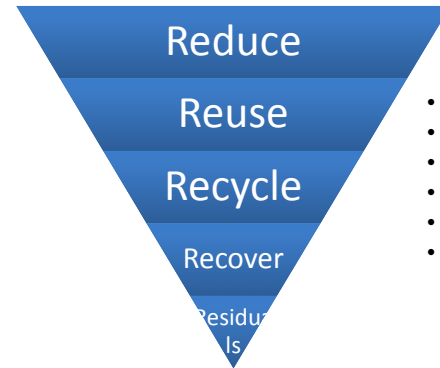


The Exercise: Tell us a solid waste success story

- ...A story the demonstrates how you would like to see solid waste managed 10-30 years in the future
 - Break into groups of 3-5
 - Discuss your ideas
 - Using flipcharts, write down your group's story(ies)
 - Draw/write/both
 - Share



Visioning the Future



- policies
- programs
- services
- regulations
- technologies
- products

Squamish Lillooet Regional District

Stage 1 Report

January 22, 2014



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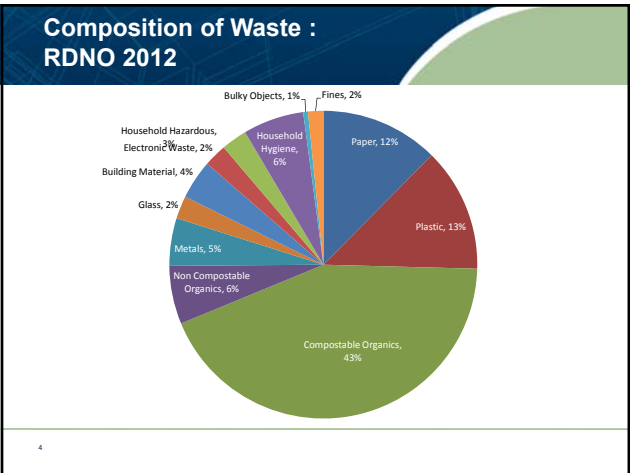
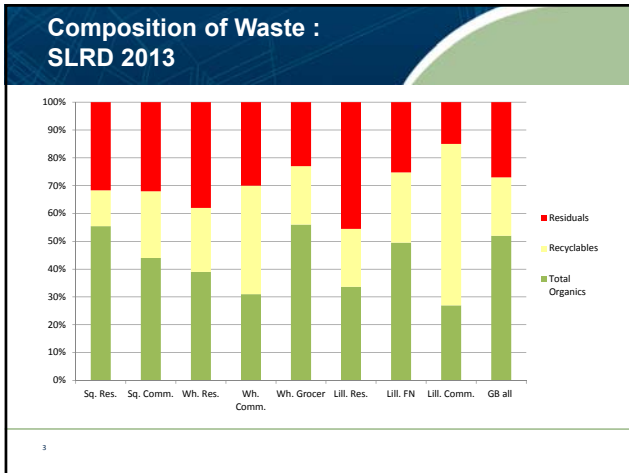
MORRISON HERSHFIELD

Stage 1 Report

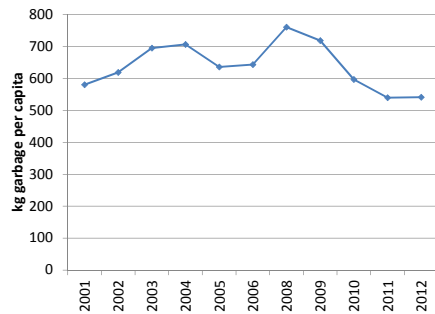
- Overview of the existing solid waste management system
- Implementation status of current Solid Waste Management Plan



2



Disposal: Waste per Capita



5

Disposal and Diversion

Disposal and Diversion	Estimated Tonnes (2012)
Disposal	
Squamish Landfill	11,692
Rabanco Regional Landfill via Whistler Transfer Station	12,795
Lillooet Landfill	3,279
Seton Lake Indian Band Landfill	unknown
Total disposal	27,766

6

Disposal and Diversion

Diversion	
Squamish curbside recycling program	936
Squamish other recycling + composting	5,525
Recycling at Whistler Transfer Station	1,698
Whistler other recycling	5,109
Whistler Composting Facility	2,510
Whistler Re-Use-It Center	309
Whistler Re-Build-It Centre	221
Pemberton Transfer Station Recycling	294
Lillooet Landfill Recycling (includes tonnes from Gold Bridge Transfer Station)	217
Devine Transfer Station Recycling	7
Extended Producer Responsibility Programs (estimated)	3,339
Total diversion	20,165
Total waste generation (disposal + diversion)	47,931
Diversion rate (diversion/waste generation)	42%

7

System Structure

- North
 - Lillooet
 - A & B
- South
 - Pemberton
 - Whistler
 - Squamish
 - C & D



8

Existing System: Education & Promotion

- Communication Tools
 - website
 - brochures
 - blog
 - newspaper ads
 - social media
 - e-reminder
 - stickers



9

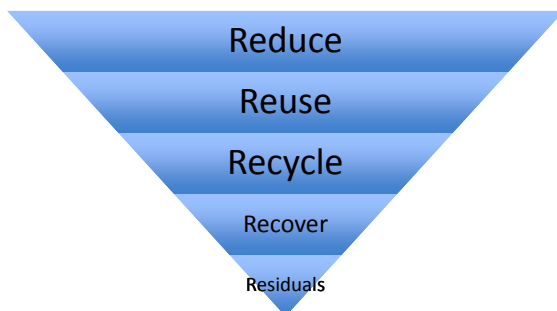
Existing System: Education & Promotion

- Information Services
 - RCBC Hotline
 - Recyclopedia & App
- Community Outreach
 - School workshops
 - Zero Waste workshop
 - Events like farmer's markets
- Other parties



10

Waste Management Hierarchy



11

Existing System: Reduce

- Food
- Plastic bags
- Tap water
- Events guidelines
- Sustainable purchasing
- Green building
- Citizen and Business assistance
- Unaddressed mail



12

Existing System: Reuse

- Reuse Stores –Lillooet, Gold Bridge, Devine, Pemberton, Whistler, Squamish (permanent site to be established at Squamish Landfill)
- ReUse it Fairs –Squamish
- ReBuild -Squamish, Whistler
- Online and Community resale
- Rental and repair
- Backyard composting



13

Extended Producer Responsibility

- EPR programs shift the cost of managing discarded products and packaging from local governments to producers and consumers
- Driven by BC Recycling Regulation
 - Requires “producers” (first importers, including retailers, distributors and manufacturers) to set up collection and management system for products listed in regulation

14

Current EPR Programs

- Set up by producers to operate stewardship programs
 - **Encorp** (beverage containers, electronics)
 - **Product Care** (paint, flammable liquids, pesticides, smoke & CO alarms, lighting)
 - **Tire Stewardship BC**
 - **BC Used Oil Management Association** (motor oil, containers, filters)
 - And others
- Collection mechanisms: Depots, return-to-retail, collection events
- Most programs funded through eco-fees levied at the point of sale

15

Current EPR Programs



- Antifreeze, used oil, etc
- Beverage containers
- Electronics and Electrical
- Lead Acid Batteries
- Paints, solvents and flammable liquids, gasoline and pesticides
- Pharmaceuticals
- Tires

16

EPR Programs -SLRD

- Generally good coverage for 3 of municipalities, less so for Lillooet
- Some programs missing options
- Some charges for collection
- Also voluntary programs and BC Hydro's fridge buyback program

17

Extended Producer Responsibility

Upcoming Products

- May 2014: Packaging and printed paper

Future EPR Products

- Other packaging and printed paper
- Automotive products
- Construction and demolition materials
- Furniture, textiles and carpet

18

Recycling & Compost Collection

Squamish

- curbside biweekly single stream recycling
 - Rigid plastics 1-5, domestic metals, paper, cardboard, mixed papers
 - Plastic bags separate.
 - bear proof bins
- curbside yard waste biweekly
 - future may include food waste collection
- depots –Carney's and landfill
 - glass
 - expanded polystyrene
 - organics (food waste)
- private service available for MFD and ICI



19

Recycling & Compost Collection

Whistler

- Function & Nester's depots
 - plastics 1-7 plus film plastics, paper, cardboard, glass and metals
 - organics (food waste including cooked)
 - in spring and fall, yard waste for specific days
- Transfer Station
 - as above plus yard waste, drywall, scrap metal, mattresses, expanded polystyrene, and clean wood.
- private service available for MFD and ICI



20

Recycling & Compost Collection

Pemberton

- Transfer Station
 - plastics 1-5 plus film plastics, paper, cardboard, glass and metals
 - no wood, yard or food waste options
- private service available for MFD and ICI



21

Recycling & Compost Collection

Lillooet

- Drop off at landfill
 - plastics 1-5 plus film plastics, paper, cardboard, glass, clean styrofoam and metals
 - scrap metal
 - yard waste -recent approval to start composting
- No known recycling services for multifamily buildings or ICI



22

Recycling & Compost Collection

Electoral Areas

- Gold Bridge and Devine Transfer Stations –drop off of paper, cardboard, plastics, metal (also cooking oil at Gold Bridge and some EPR materials at both)
- Furry Creek and Britannia Beach –curbside recycling biweekly
- Pine Crest –hired private service
- all others bring to sites already mentioned
- FN: Mount Currie has recycling depot



23

Recycling & Compost Processing

Recycling –Materials Recovery Facilities

- Lillooet Landfill –SLRD –baling
- Carney's –Squamish -private
- Waste Control Services –North Vancouver –private

24

Recycling & Compost Processing

Compost

- Whistler Compost Facility
 - in vessel, for food and yard waste plus biosolids,
 - cured in Squamish
 - 13,008 tonnes in 2011
- Sea to Sky Soils & Composting
 - new, amendment to SWMP
 - Gore Cover System
 - food and yard waste
 - 3000 tonne capacity
- Lillooet -developing



25

Construction and Demolition Waste



- Source separation encouraged through tipping fees
- Drywall is segregated (Lillooet, Pemberton, Whistler, Squamish)
- Two facilities separate C&D waste:
 - Cheekeye Recycling Yard
 - Whistler Transfer Station
 - sort clean wood waste, cardboard, steel
- Clean wood to compost
- Dirty wood to fuel
- Accepted at Lillooet, Gold Bridge (small), Whistler Transfer Station, Squamish Landfill

26

Landclearing Waste

- May be ground and left on site or taken to wood waste management site
- Burned bi-annually in Lillooet
- Gold Bridge –burned as part of fire reduction program (FLNRO)

27

Resource Recovery

- No recovery of materials or energy from mixed waste (including landfill gas use)
- Whistler exploring biofuel from compost
- Whistler Compost Facility recovers waste heat

28

Residual Waste - Collection

Squamish

- Curbside biweekly to single family
- MFD and ICI –private

Whistler

- depots (Function Junction and Nesters) for single family
- unstaffed, open 24/7
- no charge to throw
- MFD and ICI –private



29

Residual Waste - Collection

Pemberton

- MFD and ICI –private (or for single family homes that subscribe)

Lillooet

- curbside weekly
- surrounding area, MFD, ICI - private

30

Residual Waste - Collection

Furry Creek and Britannia Beach

- curbside biweekly
- SLRD provides

Pine Crest

- strata has shared bins serviced by private operator

Black Tusk

- no service, may use Whistler facilities

Other areas –self haul

31

Tipping Fees

- vary from \$78.50 (Lillooet) to \$108 (Squamish to \$120 (Whistler)
- some free drop off
- reduced charges for some types to encourage source separation (e.g. clean wood waste)
- some higher charges (as high as double) to encourage source separation (e.g. drywall, loads mixed with recyclables)
- recyclables free

32

Squamish Landfill

- District of Squamish
- Operated by Carney's
- Closure 2018
- Potential for expansion to meet needs til 2059



33

Whistler Transfer Station

- Resort Municipality of Whistler
- Operated by Carney's (contract due for renewal)
- Waste compacted and trucked to Surrey
- From Surrey by rail to Roosevelt Regional Landfill in WA, US

34

Pemberton Transfer Station

- SLRD
- operated by Carney's and Stable Enterprises
- no scale
- no commercial loads accepted
- to Squamish Landfill

35

Lillooet Landfill

- SLRD
- Operated by Moha Contracting
- Now has scale
- To close in 2068 but could expand beyond



36

Gold Bridge Transfer Station

- SLRD
- operated by contractor
- no scale
- to Lillooet Landfill
- fees for over 2 bags



37

Devine Transfer Station

- SLRD
- operated by Carney's
- no scale
- no commercial loads
- to Squamish Landfill and Whistler Transfer Station
- no tipping fees

38

Closed Landfills

- Pemberton (2)
 - SLRD
 - full closure
 - ongoing monitoring
- Whistler
 - RMOW
 - landfill gas capture and flaring
 - ongoing monitoring

39

First Nations Disposal

- N'Quatqua Band (D'Arcy)—curbside collection by Carney's
- Pavilion FN —transfer station under development, curbside collection, to LLF
- Fountain Band—closed landfill, transfer station, curbside collection, waste to LLF
- Lillooet Indian Band —curbside collection and self haul, to LLF
- Lil'wat (Mount Currie)—closed landfill, have 2 transfer stations, to Whistler TS
- Bridge River Band —has own landfill
- Tsal'álh/Seton Lake—use Seton Lake landfill

40

Other Residual Waste Management

- No open burning of waste allowed in Lillooet, Whistler or Squamish.

41

Wildlife Human conflict

- Squamish, Whistler and Lillooet have bylaws to minimize bear-human conflict, with some aspects specific to waste
- SLRD also focuses on this
- Whistler has working group and Conflict Management Plan



42

Illegal Dumping

- No specific actions by SLRD
- Pitch in Day annually
- Squamish and Whistler –have fines
- RMOW –started Adopt a Highway initiative, also a Clean Up the Lakes day

43

Financing SLRD Solid Waste Services

- \$1.1 million budget –SLRD
- \$8.7 million budget –SLRD, RMOW, DOS, DOL
- DOS set up as utility, RMOW exploring this
- Landfill, collection, transport, solid waste diversion programs, outreach, planning, administration, post-closure reserves and monitoring



44

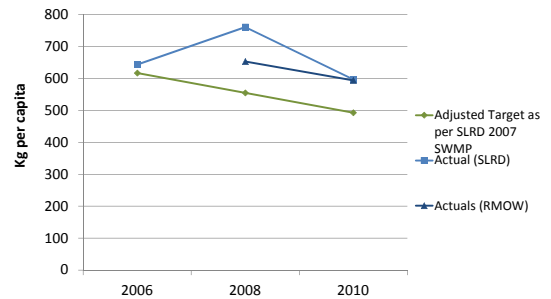
Linkages

Plans that help set the stage for this planning process:

- SLRD Regional Growth Strategy
- Official Community Plans
- SLRD Integrated Sustainability Plan
- SLRD Energy Task Force Report
- Squamish Solid Waste Strategy
- Whistler Solid Waste Strategy

45

Progress Towards Targets



46

Implementation Status

- See Report

47

SLRD Solid Waste Management

Questions? Comments?

48

Thank You



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