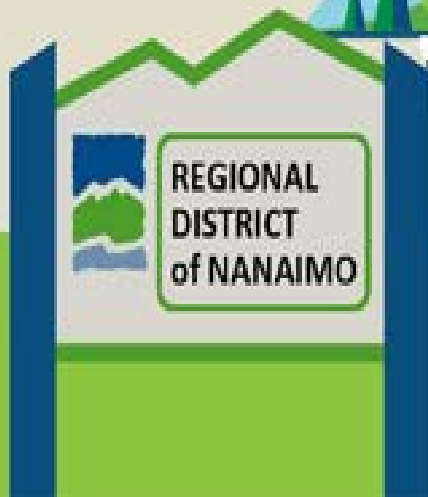
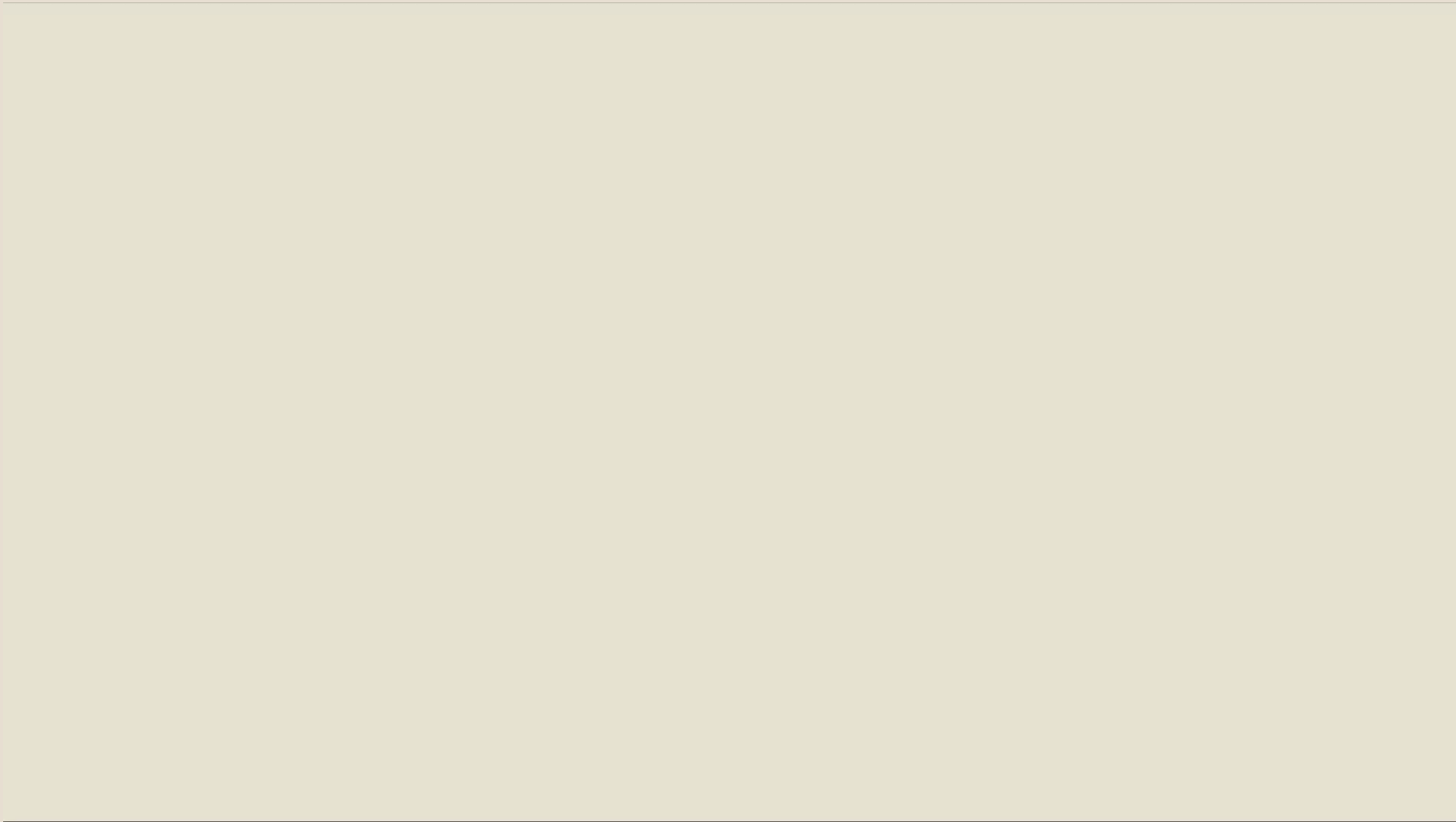
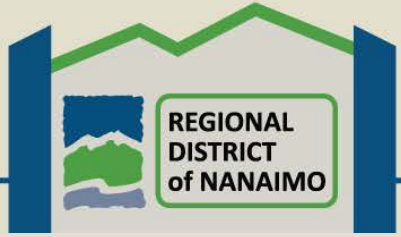


Solid Waste Management Plan 2017-2027

Presentation to Municipal Partners







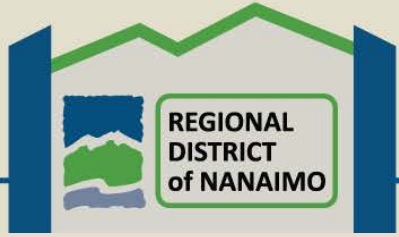
Solid Waste Management Plan Update

- Update of 2004 SWMP
- Review began in 2013
- Update guided by Regional Solid Waste Advisory Committee
- Community engagement throughout update



New Programs










- HHW
- Enhanced IC&I and C&D Waste Strategy
- Mandatory Waste Source Separation
- Waste Hauler Licensing
- Zero Waste Recycling



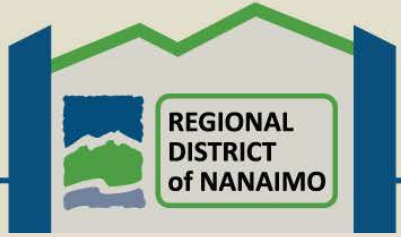
Household Hazardous Waste

- Most HHW accepted through ReGeneration
- RDN proposes:
 - HHW “Roundup”
 - Contracted drop off

| Projected Costs to Manage Non-Stewarded HHW | Yearly Estimated Budget |
|---|-------------------------|
| Total | \$100,000 |
| Tax Rate per \$100,000 assessment | \$0.28 |
| Estimated Diversion | <1% |

| | | | | | |
|---|--|---|---|---|---|
|  | Exploding bomb (for explosion or reactivity hazards) |  | Flame (for fire hazards) |  | Flame over circle (for oxidizing hazards) |
|  | Gas cylinder (for gases under pressure) |  | Corrosion (for corrosive damage to metals, as well as skin, eyes) |  | Skull and Crossbones (can cause death or toxicity with short exposure to small amounts) |
|  | Health hazard (may cause or suspected of causing serious health effects) |  | Exclamation mark (may cause less serious health effects or damage the ozone layer*) |  | Environment* (may cause damage to the aquatic environment) |



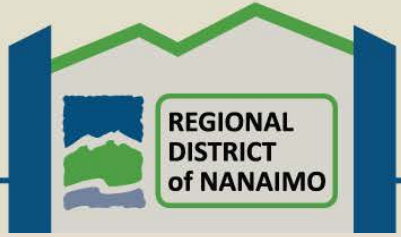


Enhanced IC&I and C&D Waste Strategy

- Education, differential Tipping Fees
- Increased enforcement of existing bans

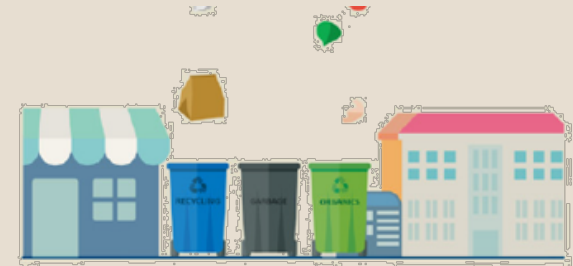
| ICI Waste Diversion | Yearly Estimated Budget |
|-----------------------------------|-------------------------|
| Total | \$200,000 |
| Tax Rate per \$100,000 assessment | \$0.54 |
| Estimated Diversion | 3% |

| Construction and Demolition Waste | Yearly Estimated Budget |
|--|-------------------------|
| Total | \$40,000 |
| Tax Rate Increase per \$100,000 assessment | \$0.11 |
| Estimated Diversion | 3% |



Mandatory Waste Source Separation

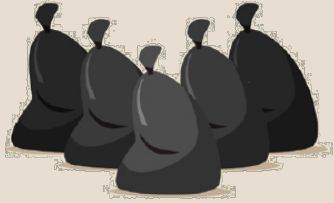
- Commercial
- Multi-Family Homes
- Institutions



| Mandatory Source Separation Regulation | Yearly Estimated Budget |
|--|-----------------------------|
| Total | \$373,000 |
| Tax Rate Increase per \$100,000 assessment | \$0.99 |
| Estimated Diversion | 10% (with hauler licensing) |



Waste Hauler Licensing



Reduced Tip Fee



Disposal Levy



| Waste Hauler Licensing | Yearly Estimated Budget |
|--|------------------------------|
| Total | \$469,000 |
| Tax Rate Increase per \$100,000 assessment | \$1.25 |
| Estimated Diversion | 10% (with source separation) |

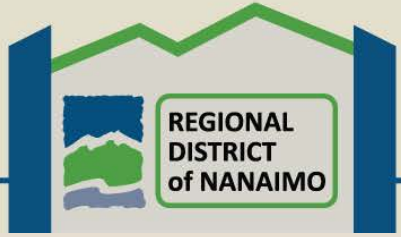


Zero Waste Recycling

Zero Waste Recycling

- Wastes that currently have little or no commercial value; typically end up in the landfill
- Funding for Nanaimo Recycling Exchange to act as a research/recycling hub

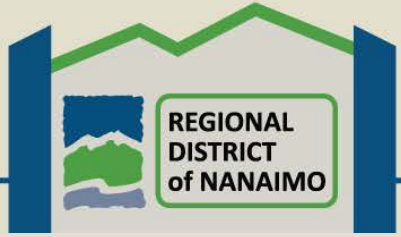
| Zero Waste Recycling | Yearly Estimated Budget |
|--|-------------------------|
| Total | \$300,000 |
| Tax Rate Increase per \$100,000 assessment | \$0.81 |
| Estimated Diversion | <1% |



Cost of Solid Waste Services

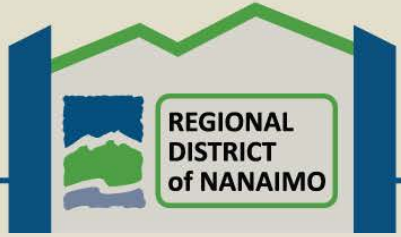
| | Annual Net Cost (\$ Million) | Per Capita Cost (\$) |
|------------------------------|------------------------------|----------------------|
| Current Zero Waste Strategy | \$3.3 | \$53.66 |
| Proposed Zero Waste Strategy | \$4.9 | \$63.69 |
| Difference | \$1.6 | \$10.03 |

| | Average RDN Tax Rate |
|---|----------------------|
| Total New Zero Waste Program | \$4.10 |
| Total Ongoing Solid Waste Programs | \$3.04 |
| Total Solid Waste Services Tax Rate per \$100,000 | \$7.14 |
| Total Solid Waste Services Tax Rate per \$500,000 | \$35.71 |



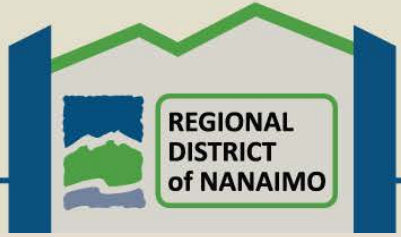
Consultation To Date

- 10 public meetings
 - 60,000 invites; 100+ attendees
- 6 Stakeholder meetings
 - 100+ meeting invitations;
 - 29 to waste industry meeting
- Two surveys
 - Landfill, transfer station
 - On-line



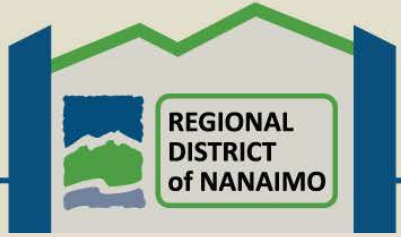
Consultation To Date Cont'd

- 2 Newsletters to over 24,000 homes
- Presented SWANA AGM (Vancouver)
- Two interviews with Shaw TV
- Social Media (Get Involved RDN)
- Public events
- Communication material (factsheets)
- Travelling display (10 locations in RDN)
- Poster Ads in RDN Transit busses



What We've Heard

- General support
 - Diversion goal, services and cost
- Industry feedback
 - Support 90% target
 - Varied opinion on licensing; general objection to increased regulation



Survey Results

Surveys

Online @ 153; In Person @ 516

31% - Aware of the SWMP being updated

97% - Supportive of the 90% waste diversion goal

77% - Supportive of cost of around \$10/person/year

5% - Moderately or slightly supportive





Summary of Programs

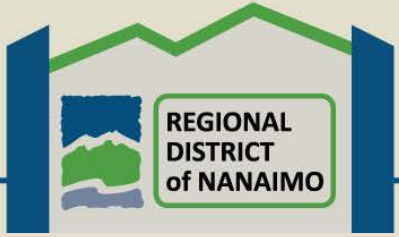
| New Zero Waste Programs | Implementation Year | Estimated Diversion |
|---|---------------------|---------------------|
| Expanded Zero Waste Education | 2018 | Not Quantifiable |
| Household Hazardous Waste | 2018 | <1% |
| Expanded Industrial, Commercial and Institutional Waste Management Diversion Increased education of existing landfill bans and a relaunch of Commercial Organics Diversion Strategy and Multi-Family Diversion Strategy Increased enforcement of existing landfill bans targeted at the ICI sector | 2018 | 3 % |
| | 2018 | |
| Expanded Construction and Demolition Waste Diversion Improve and reintroduce education and communication regarding CD waste in the region Enhanced enforcement of landfill bans related to CD materials | 2018 | 3% |
| | 2018 | |
| Waste Haulers Licensing | 2019-20 | 10% |
| Mandatory Waste Source Separation ⁹ | 2019-21 | |
| Solid Waste Emergency/Disaster Response Plan | 2022 | N/A |
| Zero Waste Recycling | 2019 | 1% |
| New Program Diversion | | 17% |
| Existing Diversion | | 68% |
| Anticipated Diversion Through Federal/Provincial Programs | | 5% |
| Total | | 90% |



Annual Per Capita Costs

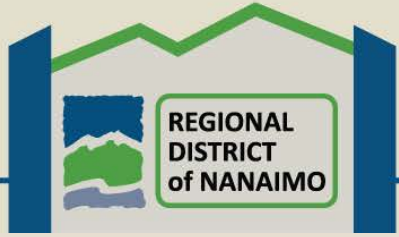
| | ANNUAL NET COST (\$ MILLION) | PER CAPITA COST (\$) |
|------------------------------------|---------------------------------|-------------------------|
| Current Zero Waste Strategy (68%) | \$3.3 | \$53.66 |
| Proposed Zero Waste Strategy (90%) | \$4.9 | \$63.69 |
| DIFFERENCE | \$1.6 | \$10.03 |
| Current Residential Curbside | \$5.1 | \$32.51 |
| Proposed Residential Curbside | \$5.1 | \$32.51 |
| DIFFERENCE | \$0.0 | \$0.00 |
| Current Disposal Operations | \$6.4 | \$40.78 |
| Future Disposal Operations | \$6.4 | \$40.78 |
| DIFFERENCE | \$0.0 | \$0.00 |
| Total Current SWMP | \$14.7 | \$94.44 |
| Total Proposed SWMP | \$16.3 | \$104.47 |
| DIFFERENCE | \$1.6 | \$10.03 |

Based on 10 year budget 2017 - 2026



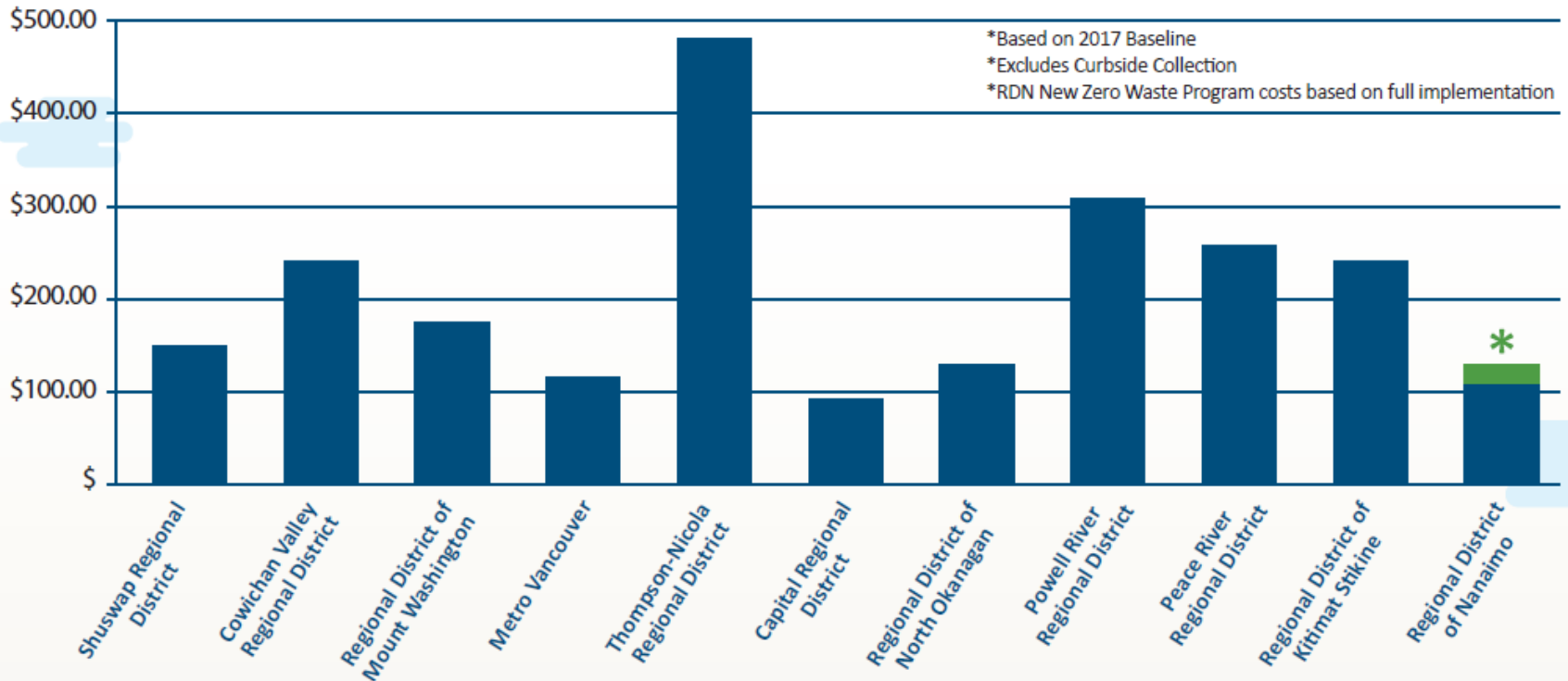
Costs of Services if Paid for By Taxation

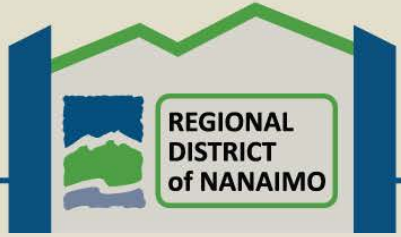
| | Average RDN Tax Rate |
|-------------------------------------|----------------------|
| Zero Waste Education | \$0.11 |
| Household Hazardous Waste | \$0.28 |
| ICI Waste Management | \$0.54 |
| CD Waste Management | \$0.11 |
| Waste Source Regulation | \$0.99 |
| Waste Hauler Licensing | \$1.25 |
| Zero Waste Recycling | \$0.81 |
| Total New Zero Waste Program | \$4.10 |
| Total Ongoing SW Programs | \$3.04 |
| Total SW Services Tax Rate | \$7.14 |
| Cost per \$100,000 | \$7.14 |
| Cost per \$500,000 | \$35.71 |



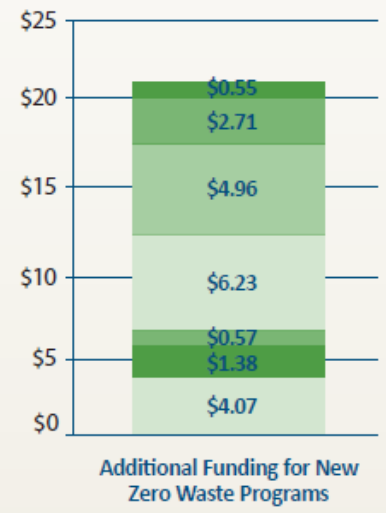
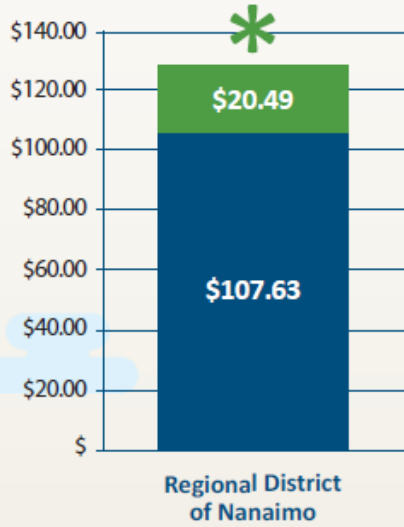
Cost of Solid Waste Services

AVERAGE FAMILY SOLID WASTE SERVICES COSTS BASED ON \$500,000 HOUSEHOLD

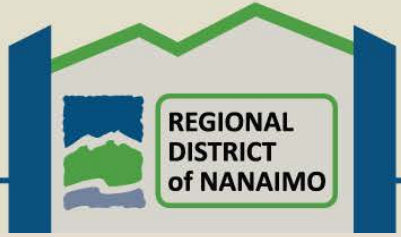




Financing the Plan



- Zero Waste Education
- ICI Waste Management
- Waste Source Regulation
- Waste Haulers As Agents
- CD Waste Management
- Household Hazardous Waste
- Zero Waste Recycling



How are Solid Waste Services Paid For?

