January 15, 2019

Regional District of Kitimat-Stikine Solid Waste Management Plan

Nicki

Thank-you for participating in the RDKS Public and Technical Advisory Committee to support development of the new Solid Waste Management Plan.

WELCOME

To the RDKS Boardroom

- Public Wi-fi:
 - RDKS 5.0 Guest wi-fi network; password: info2015.

Bathrooms:

- One located outside main entrance to the boardroom
- Additional bathrooms located through the kitchen exit, turn right down the hallway, bathrooms on the left

• Exits:

- Primary exit through the main entrance
- Secondary exit through the kitchen and turn left down the hallway (follow exit signs).

• Muster Point:

• Muster in the TELUS parking lot across the street (Lazelle Ave).

Nicki

Housekeeping items:

- Wi-fi connectivity
- Ensure remote attendees have connected ok
- Bathroom locations
- Exits and muster point
- Cell phones on vibrate please
- RDKS reimburses travel expenses at a rate of \$0.57 per km for travel on paved roads and \$0.75 for travel on unpaved roads.



Nicki

Introductions around the table and remote participants:

- Name
- Organization they represent (for members of the public, Nicki to state which seat they fill)
- Interest in solid waste

Refer to hand-out: PTAC Committee member list and list of delegates



Nicki

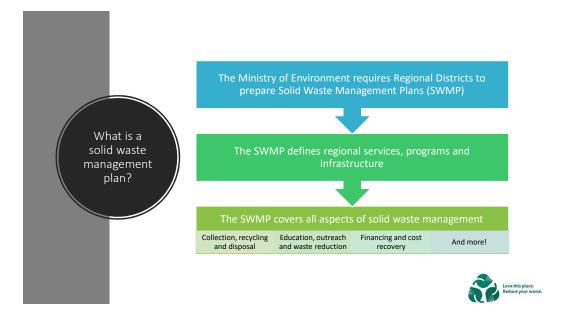
Overview of the meeting:

- Introduction to SWMP planning by Solid Waste Planning Consultant, Sarah Wilmot
- Description of the existing solid waste system in the RDKS, including:
 - Overview by Sarah Wilmot,
 - Description of the Education / Community Outreach initiatives and Extended Producer Responsibility (Recycling Stewardships) Programs by the RDKS Zero-Waste Coordinator, Erin Blaney
 - Overview of policies, bylaws, and servicing plans, as well as a description of services, facilities and programs in the Terrace Service Area and the Hazelton and Hwy. 37 N Service Area by the RDKS Solid Waste Services Coordinator, Murray Daly
- Group exercise to discuss strengths and areas for improvement of the existing system, led by Sarah Wilmot

- Coffee break
- Discussion of the proposed approach for developing the new Solid Waste Management Plan, as well as overview of PTAC Committee business (i.e., purpose, scope, authority, voting, roles, alternate members, Terms of Reference, selection of Chair and Vice Chair, and proposed schedule, presented by RDKS Environmental Services Coordinator, Nicki Veikle

Solid Waste Management Planning

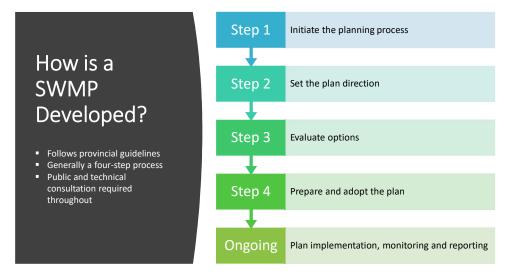




- All regional districts across BC have solid waste management plans
- The provincial government first required SWMP in 1995, which is when the RDKS's current SWMP is from
- Most regional districts have gone through several revisions or amendments and many have adopted new plans
- Plans change over time as goals are achieved, infrastructure and programs are put into place, and priorities shift
- SWMPs are the responsibility of regional districts, but they cover aspects of SWM that are undertaken by municipal governments, which is why having representatives from municipal governments on the PTAC is important



- SWMP do not just get written and then sit on a shelf; they have real influence on day to day operations as well as short, medium and long term planning
- Decreasing level of detail over time:
 - Detailed work plans for next 5 years
 - Guidelines for next 10 years
 - Vision for 20-30 years
- Provincial approval required means that there is some consistency between regional districts; everyone is working towards the same provincial goal of reducing per capita disposal to 350 kg per year
- Provincial approval also ensures that nothing in the plan contradicts provincial policy or regulations
- Once something is in the SWMP, it can be done without further consultation.



- The guidelines from the Ministry of Environment and Climate Change Strategy were updated in 2016; our process follows those guidelines with some minor adjustments (e.g. the RDKS got authorization from the RD Board before starting prep work and did more prep work before engaging the PTAC than is required)
- Here is a basic overview of what happens in each step; on the next slides we'll go into more detail on how it'll work in the RDKS
- Step 1:
 - Behind the scenes work, after RDKS Board passed a resolution to initiate the planning process
- Step 2:

Really getting started, especially with consultationStep 3:

Think about how the options would play out in the RDKS

- Continue to consult
- Step 4:
 - Draft, publish & consult on the plan
 - Revise the plan and submit to Ministry for approval
 - Adopt the approved plan
- Ongoing
 - Do what's in the plan
 - Monitoring & reporting required annually and for the 1995 SWMP, that involved many people in the room today

Step 1: Initiate the planning process

- Define the area covered by the plan
- Assemble background information
- Set the scope of work
- Develop the consultation plan
- Set the project budget
- Present draft approach to PMAC; receive and incorporate feedback
- Present approach to Regional District Board for approval
- Approval given January 30, 2018



- Started the process in 2017
- Board resolution to begin the process of planning for doing the Plan
- Internal process (staff and consultants)

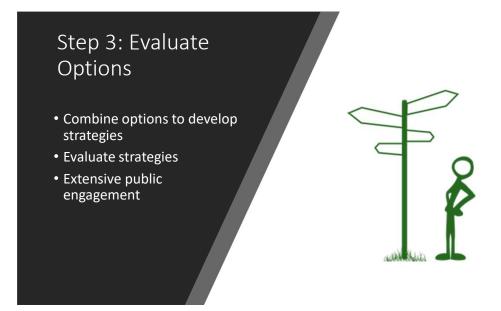
Step 2: Set the Plan Direction

- Notify interested parties and invite them to join advisory committee
- Formally establish Public and Technical Advisory Committee
- Begin to implement the consultation plan
- Identify strengths of current system and opportunities for improvement
- Establish principles, goals and targets
- Develop options for waste management

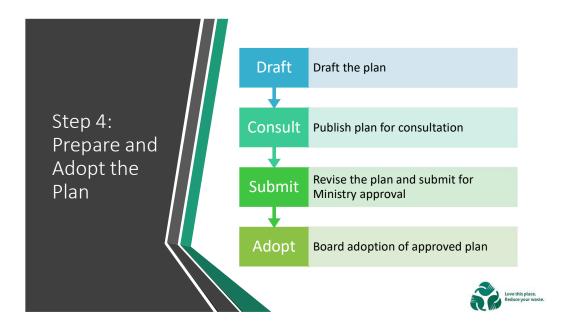


- Interested Parties included:
 - Provincial agencies
 - Federal agencies
 - Other agencies
 - Neighbouring Regional Districts
 - Member municipalities
 - First Nations within or adjacent to the plan area
 - Owners/operators of private waste management facilities
 - Stewardship Organizations and their local service providers
 - Health Service Providers
 - Industrial Camps
 - Educational Institutions
 - Grocery Stores
 - Department Stores/Major Retailers
 - Chambers of Commerce

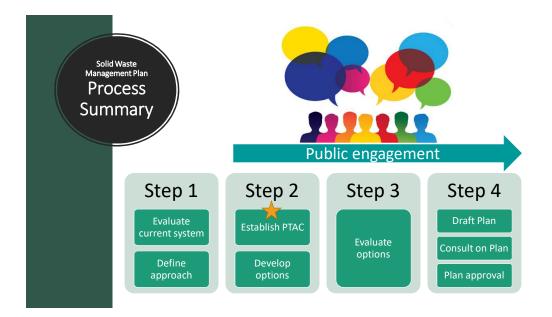
- Environmental groups
- Community Associations
- Current Plan Monitoring Advisory Committee
- Consultation plan has been drafted and will be updated and presented at the next PTAC meeting for approval by PTAC (early version was received by RDKS board in late 2017)
- Strengths of current system and opportunities for improvement is something we worked on with PMAC last year, but we will explore those topics again today with PTAC, and likely with the general public
 - Provides us with important information to set the starting point for identifying changes to policies and programs, to build on strengths and address areas for improvement
- Principles, goals and targets will be drafted during early stages to provide guidance, and finalized at the end once we know what the plan includes, so that targets are achievable based on the approved plan
- Step 2 ends with brainstorming all the possible things that the RDKS could continue, start or stop doing with respect to solid waste management
 - Best practices scan
 - Ideas arising from strengths/weaknesses analysis
 - Ideas from administration based on their day to day experiences with the system



- Rather than evaluate individual options, it can make sense to group them together into packages that we can call strategies
- Each strategy would have a theme: e.g. reduce waste disposed, reduce costs, maximize convenience to residents, etc.
- Using strategies means we won't end up picking individual options that are not compatible with each other
- We'll work a lot with PTAC in Step 3, and when we think we have the best set of strategies, we'll go to the general public and interested parties who are not on PTAC to check in with them



Sarah - This step is prescribed by the Ministry



Consultation is a priority throughout the process	Empower	Not used in this planning process	
	Collaborate	Join the PTAC	
	Involve	Request a workshop with the RDKS	
	Consult	Provide comments and participate in surveys	
	Inform	Read meeting notes and presentations on the RDKS website, attend open houses	

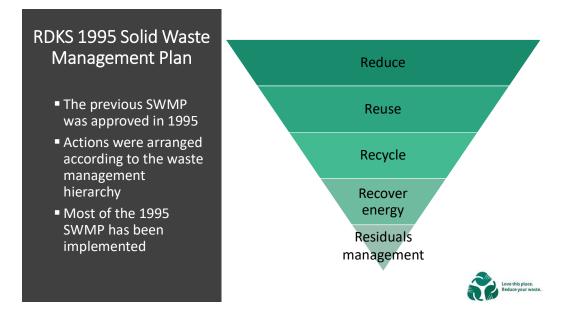
- The levels of consultation are from the Public Participation Spectrum, developed by the International Association for Public Participation
- The RDKS has developed a consultation strategy that lets people participate at different levels depending on their level of interest and time available
- PTAC represents the highest level of engagement

RDKS Existing Solid Waste Management System



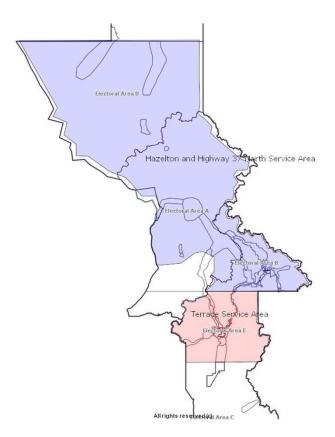
Sarah

 Report #4 of the meeting agenda provided a detailed report of the existing Solid Waste Management System in the RDKS.



1995 SWMP Implementation

- Two service areas established
 - Terrace (includes surrounding electoral areas) – Bylaw 674
 - Hazelton and Highway 37 North – Bylaw 688
- Each service area has:
 - Cost recovery model
 - Disposal restrictions
 - Transfer, processing and disposal infrastructure



- Some parts of the RDKS are not currently within a service area.
 - Kitimat
 - Electoral Area F (Dease Lake area),
 - Nass Valley
- Disposal and collection in those areas is provided by other governments, including landfills operated in Dease Lake, Telegraph Creek, New Aiyansh, and Kitimat.
- Service model varies between service areas
 - Terrace area has curbside collection for garbage, recycling and organics
 - Hazelton and Highway 37 North area has some curbside collection of garbage, provided by municipalities, and recycling depots (some located at RDKS facilities, some funded and run by extended producer responsibility organizations, which is something Erin will talk more about in a few minutes)



- RDKS invests a great deal of time and energy into user education and community outreach to support the success of programs and services.



- Curbside collection guides are updated annually, and mailed to residents that receive service.
- Photo taken during curbside recycling audit.
- Waste audits are conducted periodically to assess user participation in the recycling program. Residents use clear bags to enable viewing of materials. If "contamination" is found, residents are sent a letter explaining the items that can be collected in curbside recycling.



Outreach and educational materials are frequently reviewed and updated, and are available on the RDKS website



Some examples of community events

- On the top, recycling information sessions for the communities of Gitsegukla (left) and Kitwanga (right);

- Chipping for Charity; an annual event for the Terrace area where trees are accepted for chipping in exchange for a donation to the local food bank;

- Info booths set up at Farmer's Markets: 2017 and 2018 at least 1x/month in Terrace, and one event in Hazelton in 2018 with more planned for 2019.



- Presentation has been prepared for the 6 to 8 year-old age group (Grades 1 to 3).
- Multiple presentations in the Terrace Area in 2017 & 2018, and one in Gitsegukla. These are offered and available to all schools within RDKS Solid Waste Service Areas.
- Children are engaged with a 'place that waste' game after a brief lesson/ q& a period. Students are sent home with an "Expert Recycler" certificate and a challenge to do with their families to find recycling in their homes.
- This is a great age group to engage, as they bring what they learn home and are still very receptive.



- To date, the majority of IC&I outreach has been done in the Terrace Service Area to support the roll out new waste restrictions and facilities, with site visits documented so follow-up support can be provided as needed, with focus on cardboard and organics diversion and special waste management such as biohazardous and chemical.
- 2019 will see much more outreach to businesses in the Hazelton & Hwy 37N Service Area; less complex waste sorting requirements as there is no organics segregation requirement in this service area.



- There are customized App platforms for the City of Terrace, Regional District Greater Terrace Area, New Hazelton, and the District of Stewart (in progress).

- All residents within the Regional District have access to the web-based version on our website



Extended Producer Responsibility (EPR) Programs



Erin

- EPR is an environmental management strategy mandated by the Environmental Management Act in British Columbia, and is overseen by the Ministry of Environment.
- EPR uses Product Stewardship Programs, which are guided by the principle that whoever produces or uses a product must take responsibility for that product's environmental impact. This is why some products have an eco-fee.
- These programs are intended to be provided by the private sector, which is challenging in small &/or rural communities.
- Stewardships must renew their plans every 5 years and the system is in a constant fluid state of assessment and improvement.
- Terrace Area has good representation from Stewardships, but the further North you go the less recycling opportunities there are available.
- RDKS Zero Waste Coordinator (Erin Blaney) manages relationships with these organizations and sits on a provincial

council that oversees their management planning and implementation.

- The RDKS assess each communities accessibility to each Stewardship and fills gaps in service coverage where possible.

			Producer Fee Schedule			
	RF	CYCL	FRC [™]	Category	Material	2018 Fee Rates (cents/ kg)
			PRINTED PAPER	Newsprint	11.00	
				Magazines and Catalogues	11.00	
				Telephone Books	11.00	
				Other Printed Paper	11.00	
Packaging and Printed Paper			PAPER PACKAGING	Corrugated Cardboard	24.00	
				Boxboard	24.00	
Stewardship Program				Gable Top Cartons	52.00	
				Paper Laminates	52.00	
					Aseptic Containers	52.00
Л	A -				PET Containers	53.00
	PT VISALADY 7			PLASTICS	HDPE Containers	53.00
	LN				Plastic Film	91.00
	Plastic Bags/	Diant's Cantainan			Plastic Laminates	102.00
Glass	Overwrap	Plastic Containers	Foam Packaging		Polystyrene	91.00
A	oreimap	The second se	CHIPS		Other Plastics	91.00
				STEEL	Other Steel Packaging	20.00
	(OFFE) MLD	ABIE			Steel Aerosols	20.00
					Steel Paint Cans	20.00
Aluminum	Aluminum Paper &	Paper &	Steel Containers	ALUMINUM	Aluminum Food & Milk Containers	26.00
Containers	Paper Packaging		Steel containers	ALOMINOM	Other Aluminum Packaging	26.00
containers				GLASS	Clear Glass	15.00
			GEASS	Coloured Glass	15.00	

-Recycle BC is the Stewardship organization responsible for residential packaging and printed paper recycling throughout British Columbia.

-Funding for the program comes from fees charged to businesses and organizations that supply packaging &/or printed paper to residential consumers (i.e. grocery and department stores, manufacturers, newspapers, fast food restaurants) -Services provided by Recycle BC include depot drop-off centers, curbside collection, and incentives for collection programs. -Services currently in the Regional District are: 3 depots (Do your Part Recycling, Hazelton Bottle Depot, and K.U.T.E) and curbside collection funding in the City of Terrace (just the City, not the surrounding area)



Erin Listed are all of the EPR Depots within the Terrace Area.

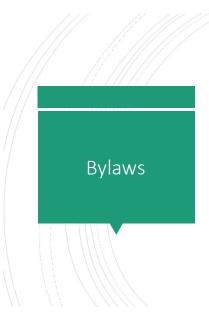
RDKS-Operated Recycling Facilities: Filling Stewardship Service Gaps				
Kitwanga Transfer Station	 Printed paper and Packaging (NOT through Recycle BC) Household and Office Electronics Small Appliances and Power Tools Light Fixtures Large Household Appliances Tires 			
Stewart Landfill (Pending Transfer Station)	 Printed Paper and Packaging Household and Office Electronics Small Appliances and Power Tools Light Fixtures, Lamps, and Bulbs Large Household Appliances Smoke and carbon monoxide detectors Batteries (under 5kg) and Cell Phones Tires 			

- Additional recycling services are planned for the Iskut and Meziadin Facilities.
- All of these services are supported by Stewardship/EPR Programs except for printed paper and packaging in Kitwanga.
- The RDKS has recently taken over the Recycle BC contract in Stewart, with the hope of adding Kitwanga to the Recycle BC program by the end of 2019.
- The consequence of not receiving Recycle BC support (subsidies) in Kitwanga is that the costs associated with recycling and transport are paid through the Regional District and supported by taxation.
- In 2018 the average cost per tonne for PPP from Kitwanga was \$1400, equating to \$3000 per month.

Policies and	Servicing Plans	Regional District of Kitimat-Stikine
Regional District of Kitimat-Stikine DRAFT Transfer Station and Landfill Commissioning Guide 92.22 August 4, 2015	Regional District of Kitimat-Stikine Draft Cardboard and Paper Products Strategy Rev. 2.3 Wily 18, 2016	Draft Community Organics Strategy Rev. 7 August 11, 2016 Regional District of Kitimat-Stikine
Regional District of Klitimat-Stikine	Regional District of Kitimat-Stikine Draft Service Specifications: Curbside Collection Service (Garbage, Recycling, Organics)	Draft Hazelton and Highway 37 North Servicing Plan Rev. 2.6.2 January 30, 2018 Means and an interferences of the second second testing boots activate forest and the second second testing

Murray

- Policies and Servicing plans guide the development of services and new strategies or facilities.
- Servicing plans exist as living documents, evolving and subject to change as the service develops.
- Service plans may be revisited from time to time and completely re-developed.

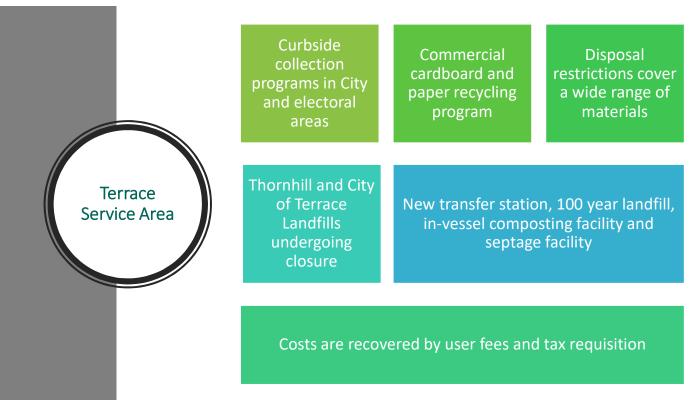


- Service Area Establishment
- Facility Regulation Bylaws
- Solid Waste and Recycling Collection Service Rates and Regulations

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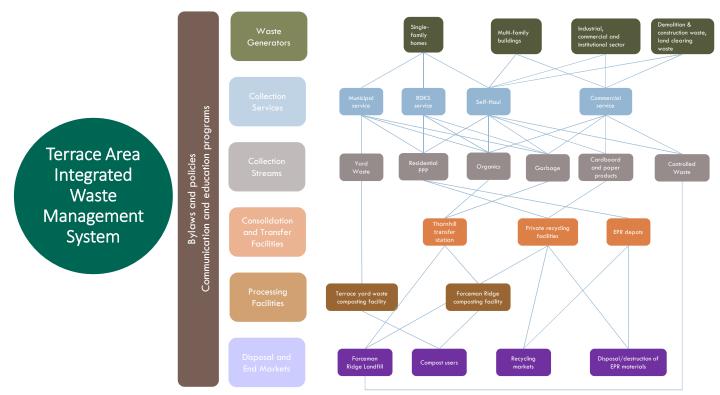
- Service Area Establishment Bylaw created to first identify the service, how and where it is provided and if applicable, how it is financed.
- From the Service Area Establishment Bylaws, Bylaws are then created to facilitate the service – facilities, collection, materials restrictions, enforcement, etc.
- Facilities bylaws outline the operations of waste management facilities including facility use regulations, acceptable, restricted and prohibited types of waste, and payment terms.
- Collection services and rates regulation describes the collection service provided by the RDKS, including the types of properties included in the service, collection frequency, types of materials collected, handling of waste and containers, the container assistance program, the medical waste exemption programs, and the cost.

(Bylaw No. 657, 2015 and Bylaw No. 658, 2015) (Terrace Area No. 671, 2016 and No. 682, 2016; Hazelton and Highway 37 North Area No. 688, 2017) (Terrace Area No. 674, 2016)



The Terrace Area Integrated Waste Management System is comprised of multiple programs, services and facilities, including:

- Curbside collection with weekly organics collection and alternating bi-weekly garbage and recycling collection;
- Program for recycling paper and cardboard from commercial sources;
- Closure of the Terrace landfill and development of a Transfer Station;
- New Forceman Ridge Waste Management Facility with composting and septage facilities;
- Cost recovery is a 50/50 split between taxation and tipping fees.



The Terrace Area Integrated Waste Management System required figuring out numerous "moving parts."



- Contracted collection service currently provided by Geier Waste Services through to November 2021.
- Alternating collection of garbage and recycling; Organics collected weekly.
- Manual collection 25kg weight limit per container.
- Containers no larger than 121L (99L for organics).
- Containers may be set out overnight, secure lid, recycling and garbage in bag, then placed in can.
- Organics may be placed in compostable bags before placing in can, but not required.
- Collection from single family residents, mobile home parks and multi-family dwellings up to 5 units.
- RDKS received no financial support from Recycle BC for PPP recyclables; however, the collection model mirrors Recycle BC communities (i.e., City of Terrace collection program).



- Alternating bi-weekly collection of garbage and recycling;
 Organics collected weekly.
- Collection of garbage and recycling alternates with Regional District so as not to overload the Transfer Station or Do Your Part Recycling.
- City purchased a new truck to facilitate automatic collection and residents were provided rolling carts for recycling and garbage (organics added at a later date). Residents paid for carts through a line item on property taxes.
- City does not collect from multi-family residences, apartments or mobile home parks.
- City of Terrace is a Recycle BC community (i.e., received subsidy from Recycle BC for PPP materials).
- Material is transported to same facility as Regional District material (Do-Your-Part Recycling).
- City collects single-stream recycling loose in bin no single

use plastic bag (currently overs are collected in single use bags, cardboard may be bundled outside cart).

- Organics is limited to the 121L cart.
- Yard waste collection occurs weekly on Mondays from May to October. Yard waste material is hauled separately (manual collection of yard waste bags) and is managed at City Works yard to be used in composting for city properties.



- Industrial, Commercial and Institutional (ICI) sector required to separated cardboard, paper and organics from general waste stream.
- Collection service is not provided by Regional District, but may be contracted by local private haulers.
- Waxed cardboard may be included in organics collection.
- This photos is taken outside of the Thornhill Meat Market (small grocer).



- Do Your Part Recycling in Thornhill is a recycling depot accepting Recycle BC materials.
- All residents may drop off any PPP material as well as "depot only" items such as glass, film plastics and Styrofoam.



- RDKS identified carboard and paper products as a prohibited material prior to the opening of Forceman Ridge.
- RDKS has a contract with Do Your Part to provide for the processing and marketing of commercial carboard and fiber.
- Profits from the sale of the commodity are split 50/50 with the contractor and Regional District.
- ICI users may establish an account with Do Your Part to drop off material at a cost of \$99 per tonne.
- Alternatively ICI users may contract a collection service with an area hauler.

Thornhill Transfer Station

- Thornhill Landfill closed
- Leachate catchment with wetland treatment lagoons
- Transfer station facility:
 - Automated scale
 - Scale house attendant
 - Z-wall
 - Marshalling bays
 - Tip floor (Transfer Station building)





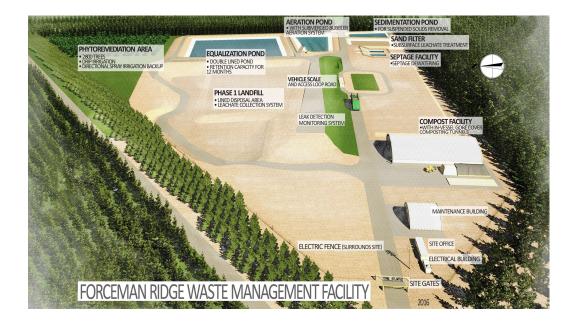


- Thornhill Transfer Station located at former Thornhill landfill.
- Landfill is undergoing a closure plan (nearly complete) with monitoring and leachate treatment system.
- Open Saturday to Monday for residents and Monday to Saturday for commercial users.
- All disposal is by weight; Minimum \$10 fee (for residential garbage the equals approx. 200 pounds).
- Commercial days are run in a semi-automated fashion commercial users swipe card for entrance and again at scale. The tip floor and organics bay is manned by an equipment operator.
- Residential area has a staffed scale house and manned z-wall to ensure proper segregation of materials. Garbage, demo/construction, yard waste, clean wood, and organics are collected in bins.
- U-bay area for collection of metal, white goods, propane tanks, and small loads of residential concrete.

- No controlled waste accepted at the Transfer Station.
- Cardboard and other recyclables not accepted.
- Textiles are accepted by a Salvation Army trailer set up on site.
- No cash accepted; only credit, debit or by account.



Development of the Forceman Ridge Waste Management Facility took 14 years, from initial conception, through extensive consultation, engineering through to construction in 2015. Through the construction process, local contractors were employed as much as possible, and training opportunities were offered through Coast Mountain College.

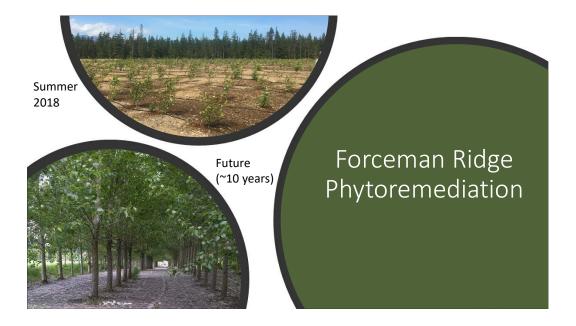


- Forceman Ridge WM Facility is currently 13 ha, with an additional 8 ha planned for Phase 2.
- Award winning facility.
- Conceived as a 100 year facility.
- The current diversion rates are higher than initially expected; therefore, waste received at facility is only 60% of anticipated volumes.
- Leachate and septage effluent is pumped to Equalization (EQ) pond, pumped to Aeration pond, gravity fed to the sedimentation pond and gravity fed to the sand filter before discharge to the phytoremediation area.
- De-watered septage is processed through the compost facility.
- Controlled waste managed at Forceman includes contaminated soil up to hazardous level, asbestos, concrete and waste from industry (with a 25% surcharge).



Forceman Ridge Landfill Active Face

- Revelstoke Iron Grizzly (RIG) plate system reduces need of daily cover (soil or gravel).
- Small active face and use of RIG plate system reduces occurrences of vectors (birds) at facility. Birds at active face spread refuse among facility and into surrounding area which may attract other, larger wildlife to site.
- Wildlife and electrified bear fence keep facility secure against larger vectors (wildlife).
- Contaminated soils may be utilized as alternate daily cover.



- Two-acre phytoremediation "orchard" planted with a mix of hybrid poplar, birch and cottonwood trees.
- Treated leachate discharged to the orchard during the growing season for uptake by deciduous trees.
- Orchard will be monitored over the next few years and spacing will occur with the plant species determined to be most efficient replacing those other tree species which may have died off or are not growing as quickly.
- Mature trees will be harvested and processed through the organics facility (20 plus years).



- GORE[™] compost facility;
- Troughs in the concrete floor introduce aeration to the material and the GORE cover retains heat.
- Compost piles are monitored for oxygen, temperature and moisture to ensure optimal conditions for processing organics.
- Material is received from residential curbside collection, commercial collection and residential drop-off at Thornhill transfer station.
- Compost facility can process any "living" item (bones, fish, meat, grains, dairy, soiled paper products and waxed cardboard).
- The compost facility provides the final step in septage treatment.
- Composted product is screened and used for final cover at Thornhill Landfill Closure.

"The solid waste management planning process, careful landfill siting, genuine and meaningful First Nations and public consultation, and design and construction of the of the facilities clearly demonstrate that the Regional District has gone above and beyond." - BC Ministry of Environment

"The quality and the level of environmental protection at these sites have set a new standard for other projects to match. Forceman Ridge is the most environmentally protective landfill in its class, in Canada, [and] possibly North America at this time." - BC Ministry of Environment

Award-Winning Terrace Area Integrated Solid Waste Management Program

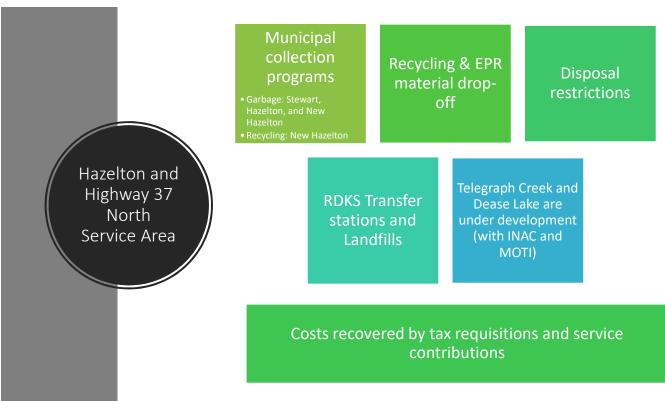
- NCLGA Community Leadership Environmental Sustainability Award
- Community Energy Association Climate and Energy Action Award
- UBCM Community Excellence Award
- FCM Sustainable Communities Award
- SWANA 2018 Excellence Award



Murray

Awards won by the Terrace Area Integrated Solid Waste Management Program:

- North Central Local Government Association Community Leadership and Environmental Sustainability award,
- Community Energy Association Climate and Energy Action Award,
- Union of BC Municipalities Community Excellence Award,
- Federation of Canadian Municipalities Sustainable Communities Award,
- Solid Waste Association of North America 2018 Excellence Award.



Hazelton and Highway 37 N Service Area includes:

- Recycling / EPR depots at Kitwanga Transfer Station and Stewart landfill (soon to be Transfer Station);
- Some EPR materials accepted at the Hazelton WM Facility, Meziadin and Iskut landfills;
- Disposal restrictions vary by facility (related to ability to provide diversion or alternative disposal solutions);
- Costs are recovered by tax requisitions and service contributions from First Nations; Tipping fees apply only to industry and controlled waste such as contaminated soil and asbestos.

The Telegraph Creek Band has been working with INAC on transferring waste materials to the Dease Lake Landfill and on developing a diversion plan for the more common recyclables. The RD will continue to work with Telegraph Creek residents and the Band. Consultants for INAC have undertaken solid waste planning ahead of more interaction with RDKS and others. They and the Tahltan fully expect to build a Transfer Station and haul waste to Dease Lake. Dease Lake Landfill is controlled by MOTI and has hired Tahltan operators which are paid by funding from INAC. Dease Lake MOTI personnel are aware that there are a number of investigations that should be undertaken to assure our Board that the site is not a liability before ever considering RDKS would assume its ownership.

There are a number of questions that the RDKS has not been able to have answered, such as how much would the transfer station cost, leading to "what percentage of how much" would RDKS be contributing, does the Dease Lake landfill have the capacity to receive refuse from Telegraph Creek and how do they know that, does the road in and out of Telegraph need to be assessed, what's the contingency for waste storage when road conditions don't permit hauling to Dease Lake, what investigations have been undertaken, what volume do they expect to be generated, etc.

Hazelton Waste Management Facility

- Landfill Phase 1
- Z-wall for public drop-off
- U-bays / marshalling area
- RIG plates on active landfill face
- Septage/liquid waste facility



Murray

Hazelton WM Facility:

- Uses the same daily cover/RIG plate system as Forceman with a smaller active face and daily volumes;
- Currently filling Phase 1 of the landfill; anticipated 2 year remaining lifespan before complete closure of Phase 1 and beginning Phase 2;
- Open Thursday through Monday;
- Z-wall for public drop off of refuse;
- Has a designated bay at the Z-wall to accommodate limited commercial drop off on closed days;
- Accepts some recyclable items (EPR and non-EPR materials), including tires, scrap metal, white goods and cardboard
- Accepts asbestos under a controlled waste application;
- Does not currently accept contaminated soil;
- Accepts septage;
- Septage treatment and leachate collection system: septage de-waters into the equalization (EQ) pond which is pumped to

engineered wetland ponds 1, 2 and 3, then pumped to pond 4 (1/2 wetland, ½ sand filter). Water samples are taken from pond 4. If compliant with water quality guidelines, water is discharged to ground from pond 4; if not, it is recirculated back to EQ pond for second round of treatment.



Kitwanga Transfer Station:

- Formerly the Kitwanga landfill (landfill closed in 2017);
- Open Wednesday through Sunday;
- Accepts municipal solid waste (MSW) and construction/demolition debris up to 30 m³;
- Has a tip floor building with Titan trailer similar to Thornhill Transfer Station, for receiving MSW;
- Recycling Diversion Center kiosks accept EPR materials, including PPP, Styrofoam, cardboard, metals and glass containers, smoke alarms, small appliances, electronics, batteries, cell phones, light bulbs and fixtures;
- U-bay area for scrap metal, propane tanks, and white goods;
- Cardboard collection on site.

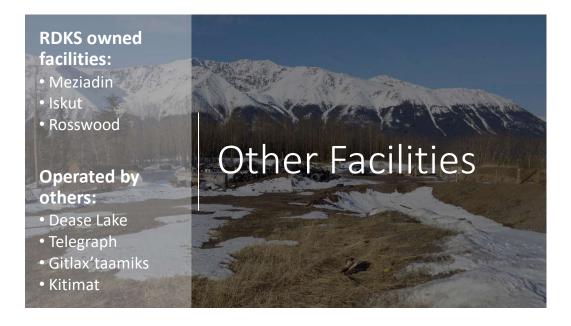


Stewart Landfill:

- Phase 1 of earthworks for the landfill closure was completed in fall of 2018;
- Waste is currently being landfilled on the site through the winter of 2018/2019;
- Planned full closure of the site in the spring/summer of 2019 with construction of a Transfer Station on the site;
- Waste will be hauled to the Meziadin landfill;
- In December 2018, recycling services transitioned from Border Town Recycling to RDKS
 - RDKS took over the contract for Recycle BC from Border Town Recycling;
 - RDKS built Recycling Diversion Center kiosks at the Stewart landfill;
 - Recycling Diversion Center accepts a number of EPR materials, including PPP, Styrofoam, cardboard, metals and glass containers, smoke alarms, small appliances,

electronics, batteries, cell phones, light bulbs and fixtures;

- Also accepts scrap metal, propane tanks, white goods and off-rim tires.
- Commercial cardboard collection is currently managed by the District of Stewart.
- RDKS is working closely with the District of Stewart and Border Town Recycling to offer outreach and education to residents;
- RDKS has contracted a Border Town employee to assist with the transition in recycling services.

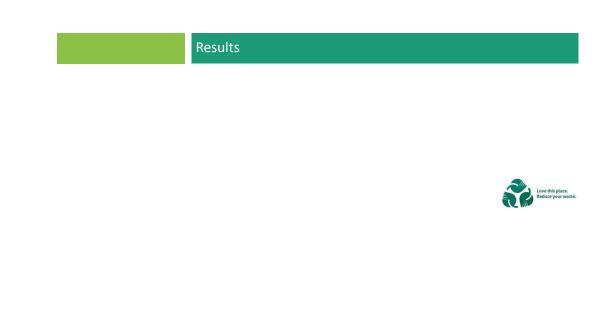


Other facilities in the RDKS include:

- Meziadin landfill Serves as a hub facility; will be receiving material from Stewart and also services northern industries such as Brucejack and Red Chris mines;
- Iskut landfill Primarily service the Tahltan First Nation community, though a few RDKS residents and lodges are located in the area as well;
- Rosswood landfill Open to residents of Rosswood community only (approximately 250 residents);

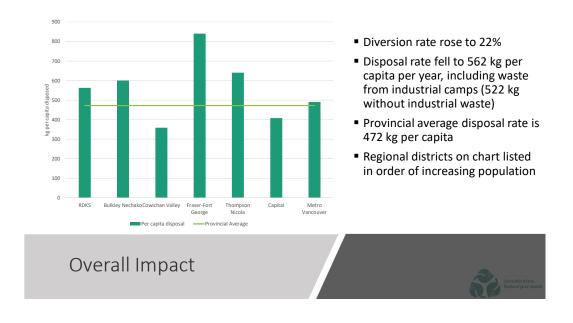
Facilities that are not managed by the RDKS include:

- Dease Lake (Ministry of Transportation and Infrastructure),
- Telegraph Creek (Tahltan),
- Gitlax'taamiks (Nisga'a),
- Kitimat (District of Kitimat).
- RDKS pays into solid waste services for the Dease Lake, Telegraph and Gitlax'taamiks landfills to cover non-First Nations residents living in those areas.



Sarah

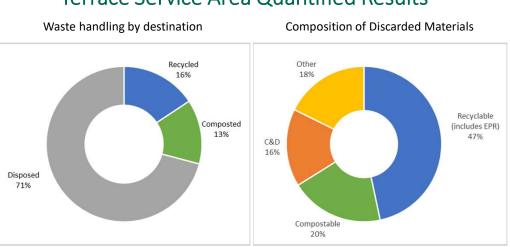
- What has all of this infrastructure and service achieved?



Sarah

- Per capita disposal rate is now the preferred way of measuring progress, because it is difficult to measure all diversion, and impossible to measure reduction and reuse. Furthermore, in addition to diversion programs run by local governments, diversion is done by private sector and those operators are often reluctant (and not required) to share information about the quantity of waste they manage
- Disposal largely occurs at facilities owned by local governments, and local governments know how much is brought in, either from scale data or from air space consumption surveys
- RDKS has a lower per capita disposal rate than similar regional districts in north-central BC (Bulkley Nechako, Fraser-Fort George and Thompson Nicola).
- RDKS has a higher per capita disposal rate than leading BC regional districts, such as Cowichan Valley, Capital Regional District and Metro Vancouver

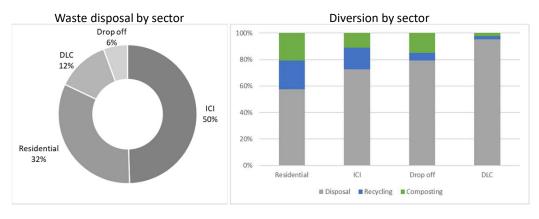
- The national leader is Nova Scotia, which has a per capita disposal rate of 386 kg
- The provincial target for BC is 350 kg



Terrace Service Area Quantified Results

Sarah

- The graph on the left shows how ALL the waste in the service area is managed
 - Almost one third (29%) goes somewhere other than a landfill
- The graph on the right shows what kinds of materials are disposed of (i.e. what is in the grey part of the chart on the left)
 - This shows that the majority of what is thrown out could have been managed by existing programs (recycling and composting)
 - This needs to be reduced, hence the RD's focus on education and promoting the existing services



Terrace Service Area Quantified Results

Sarah

- Another important thing to consider is WHO is generating the waste. We usually refer to 3 or 4 different sectors:
 - Residential = single family up to 4 units; waste that is collected by the local government or their contractor
 - ICI = Industrial, Commercial, Institutional; schools, offices, restaurants, grocery stores etc. Larger multifamily buildings are usually collected together with ICI waste because of how the waste is set out in large bins
 - Drop off = materials brought to the transfer station or disposal site by the generator themselves, not a hauler.
 Often small contractors, do it yourself types, spring clean up etc.
 - DLC = Demolition and Land Clearing; also sometimes referred to as C&D = construction & demolition or CRD = Construction, Renovation & Demolition.
- The breakdown of disposal by sector in the RDKS is fairly typical.

- Half is from the ICI sector
- This shows how important it is to address waste diversion from the sector – no matter how good the residential programs are, there is a limit to what can be achieved if the ICI sector is not also successful in waste diversion
- Looking at the amount diverted from each sector, we can see that the residential sector is the most successful in diverting waste, at nearly 40%
 - This is encouraging, but more can be done



Sarah to facilitate group exercise:

Get into groups of four to discuss and brainstorm ideas. Each group will be asked to decide on their top 3 ideas of strengths and top 3 ideas of areas for improvement. Each idea should be written out on one sticky note. One person from each person will present on behalf of the group. Each group's sticky notes will be collected as they are read out, and the facilitator will categorize the ideas on a whiteboard. BREAK



Development of the New Solid Waste Management Plan



Nicki

The RDKS has implemented or is in the process of developing the initiatives borne from the 1995 SWMP. In 2017, RDKS began planning to develop a new SWMP.



- Improve operational efficiencies
- Continue monitoring new and upgraded solid waste management facilities and services
- Assist users to improve participation in waste segregation and diversion programs
- Maintain and improve relationships with larger waste generators
- Expand service delivery to more rural communities.



Nicki

The RDKS anticipates that the overarching theme for the new SWMP will be improving operational efficiencies (getting our existing services, facilities, and programs running like a welloiled machine). This will include:

- Contractors are well trained and completely familiar with the service standards;

- RDKS staff have the training and skills needed to perform their duties competently and have clear, well documented expectation and job duties;

- Information needed to guide program and policy development is available when required (e.g. waste audits, inventory of waste management systems for large generators);

- Clear policies and guidelines are established for routine occurrences so staff can address situations without requiring management or Board guidance;
- Servicing plans are established and approved, so resources can be allocated accordingly.

Other overarching focus will be to:

- Monitor new and upgraded facilities;
- Improve user participation in diversion programs (i.e., recycling and composting);
- Maintaining relationships with large waste generators, such as industry;
- Expanding services to cover our rural communities.

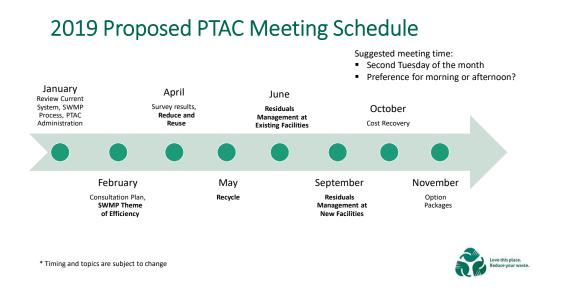
Review of the cost recovery models in the Terrace and Hazelton and Highway 37 North Service Limits on Municipal Solid Waste accepted at Forceman Ridge from industry and sources outside the RDKS Access to services / facilities in other service areas Contaminated soil handling and use Landfill gas utilization/carbon credits Setting parameters for acceptable liquid waste brought to RDKS waste management facilities · Require waste management space in new construction · Requirements for deconstruction (instead of demolition) Anticipated Setting an upper limit on the acceptable cost of recycling cardboard and printed paper and packaging Topics for the · Strategies to assist in the prevention of illegal dumping · Strategies to reduce single use items **SWMP** Development of a food waste reduction strategy Telegraph Creek and Dease Lake waste management solution · Potential participation of District of Kitimat in the Terrace Service Area Recycling collection in the Hazelton and Highway 37 North Service Area Expansion of the list of Prohibited Wastes Household hazardous waste collection Curbside audits of residential waste Solid waste source control and enforcement for the Industrial, Commercial and Institutional (ICI) sector

Nicki

- RDKS Solid Waste Management team has scoped 20 topics anticipated for review and/or development under the new SWMP.
- These topics are preliminary; more topics can be brought up by PTAC and other stakeholders.
- See the "Draft Topics for the Solid Waste Management Plan Revision, Rev.1.1, January 2019," on the agenda as Report 5, for a full list and description of each topic.



- The Ministry of Environment "Guide to Solid Waste Management Planning, 2016" recommends developing SWMP's according to the 5R's.
- Managing residuals (i.e., landfilling waste) should be used once all other diversion options have been exhausted.
- The approach that RDKS is proposing for developing the new SWMP is to address the "Topics" as they relate to the 5R's.



The proposed approach to developing the SWMP and meeting with PTAC is as follows:

- February, discuss "Efficiency" as an overarching theme that will apply to all SWMP topics;
- April, discuss topics regarding "Reduce and Reuse";
- In May, discuss "Recycling" topics;
- In June, discuss topics relating to existing waste management facilities;
- In September, discuss topics regarding development of new waste management facilities.

Report #2 of the meeting agenda provides a detailed explanation of the proposed schedule for PTAC and the Solid Waste Management Plan.



Presentation of Topics

Technical memo for each topic:

- Scope and context
- Problem formulation
- Information gaps
- Stakeholders
- Options analysis
- Recommended management approach

PTAC will discuss each topic and support or propose alternatives to the approach recommended by Administration

- Administration proposes to present each topic to PTAC through a technical memo.
- All of these topics require additional research to be conducted prior to PTAC being able to make any recommendations.
- Administration will scope each topic and provide management options and recommended approach in a technical memo.
- PTAC will discuss each topic at the respective meeting and either support or propose alternatives to the recommended management approach.

PTAC Committee Business



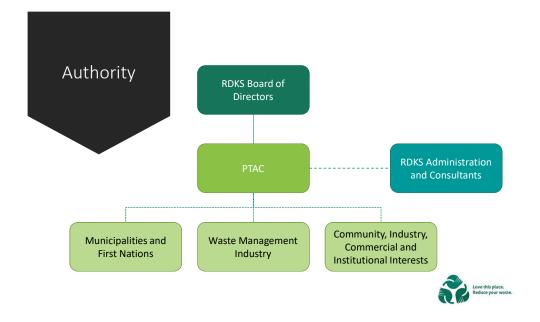


- PTAC's primary purpose is to provide recommendations for the SWMP to the RDKS Board.
- The secondary purpose is to provide input on ongoing initiatives from the 1995 Plan.



PTAC committee members need to:

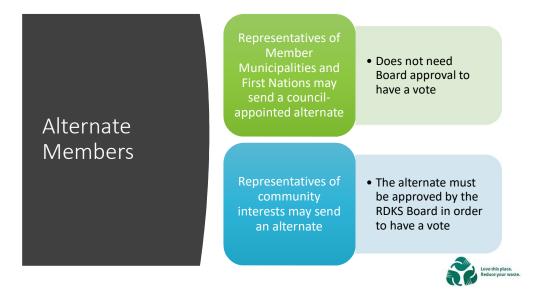
- Provide feedback on topics and make recommendations that take into consideration all parties involved;
- Represent and report back to their organization or interest regarding solid waste management; and
- Provide feedback on consultation approaches and potentially participate in stakeholder consultation.



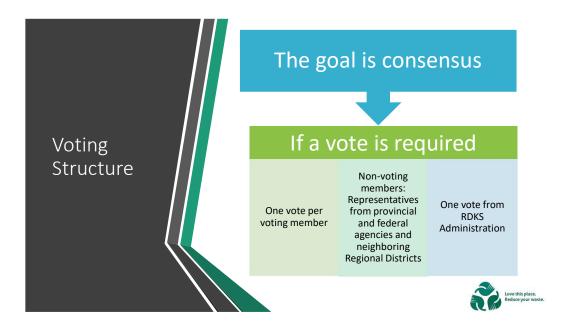
- PTAC is comprised of both public and technical interests, including local governments (i.e., member municipalities and First Nations communities), waste management industry, public/community and ICI interests.
- RDKS Administration and Consultants will provide information to PTAC to assist the committee in making informed decisions and will provide recommended management approaches.
- PTAC will report and make recommendations directly to the RDKS Board regarding SWMP initiatives.



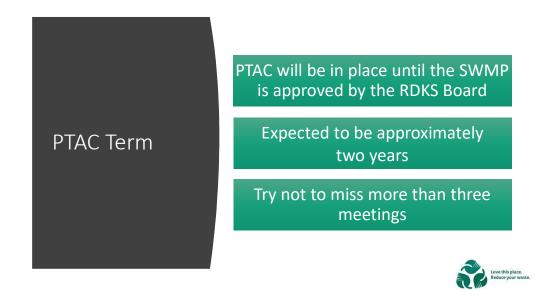
- Based on the direction provided by PTAC, RDKS Administration will prepare reports, meeting agendas and minutes and administer the committee.
- The Chair (or Vice Chair when the Chair in not in attendance) should review the agenda in advance with RDKS Administration and will run the meetings.
- PTAC committee members will be expected to attend meetings (in person or via teleconference), review meeting agendas and reports, and participate in discussion.



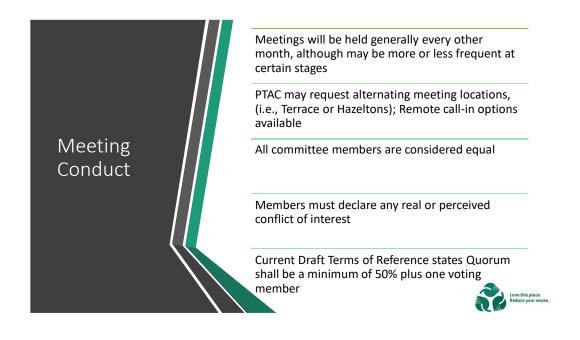
- Members are encouraged to delegate an alternate to attend in their absence.
- This will ensure that we have good participation, discussion and better success of achieving quorum.
- For representatives from municipalities and First Nations communities, council may appoint an alternate.
- For community representatives, alternates will need to be approved by the RDKS Board prior to the alternate becoming a voting member.
- Please note that, if both the alternate and the primary member are attending the same meeting, they will only have one vote.



- Consensus is the goal.
- Voting members get one vote.
- The two RDKS Board members sitting on PTAC each get one vote. RDKS Administration gets one collective vote.
- Representatives from provincial and federal agencies and neighboring Regional Districts are considered non-voting members as the services developed within the SWMP will not directly affect their interests.
- Non-voting members can still participate in discussion.



- Under the anticipated schedule, the SWMP will hopefully receive approval by the RDKS Board in the summer of 2020.
- Administration expects that PTAC will meet approximately 11 times over the next two years.
- We would appreciate if members (or their delegated alternates) try not to miss more than three meetings.



- Meetings are, in theory, held every second month. However, initially, PTAC will be meeting more frequently to facilitate development of the Plan. The proposed meeting schedule currently proposes to meet on the second or third Tuesday of the month in months of January, February, April, May, June, September, October and November of 2019.
- Administration recommends alternating meeting locations between Terrace and Hazelton to facilitate in-person attendance. Are there any other locations that PTAC members would like to meet (i.e., Stewart, Kitwanga)?
- All members should declare if the perceive any conflict of interest.
- The Draft Terms of Reference currently state that Quorum will be 50% attendance plus one voting member.



Report #1 of the meeting agenda provides a detailed explanation of the Draft PTAC Terms of Reference.

Highlights of the Draft PTAC Terms of Reference include:

- All members receive one equal vote with the exception of:
 - Representatives from provincial and federal agencies and other regional districts, who are non-voting members;
 - RDKS Administration will be allocated one vote.
- All members or their organization may appoint an alternate to attend in their absence, as follows:
 - Members representing member municipalities and First Nations may send a council-appointed alternate, who does not require prior approval by the RDKS Board. Council-appointed alternates may cast one vote.
 - Members representing community interests may delegate an alternate, who must be approved by the RDKS Board in order to be a voting member of PTAC. An

alternate sent without Board approval may participate in discussions but cannot vote.

- Members who miss three committee meetings during the term of the committee may have their membership revoked at the Board's discretion.
- Quorum shall be a minimum of 50% plus one voting members.
- Travel assistance is provided to members travelling to attend meetings.

PTAC Targeted Membership

Target membership representative of the entire RDKS

Recommend soliciting representatives for:

- District of Kitimat
- Village of Hazelton
- Public representation:
 - Electoral Area A
 - Electoral Area D
 - Electoral Area FDistrict of Stewart
 - District of Stewart
 Village of Hazelton

Consider additional solicitation for representatives from First Nations communities



Nicki

Report #3 of the meeting agenda provides a detailed explanation of the PTAC solicitation process and PTAC targeted membership.

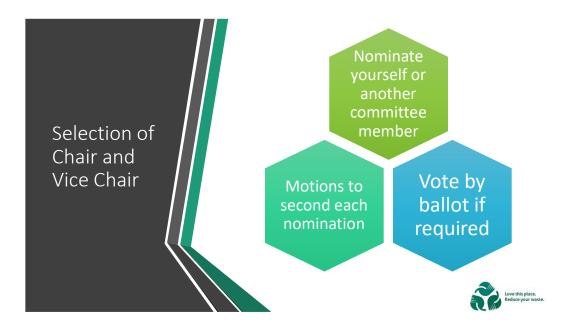
Our process to solicit members to PTAC was conducted through the fall of 2018 and included:

- On September 6, 2018, RDKS Administration send out letters with tailored content to 194 stakeholders and stakeholder groups;
- In early October 2018, 70 posters were distributed and posted to visible locations throughout the Regional District;
- Throughout October 2018, two advertisements were run in the Terrace Standard, Kitimat Connector, Bulkley Browser and Smithers Interior News;
- Through October and November 2018, advertisements were posted to RDKS Economic Development social media pages, including Facebook and Twitter;

 On December 4, 2018, (following an initial review of applications received) an email requesting participation in PTAC was sent to unrepresented local governments. This included all First Nations communities with the except of Haisla Nation Council, the District of Kitimat, the Village of Hazelton and the North Coast Regional District (to participate as a non-voting member).

RDKS Administration recognizes that there are a few key positions on PTAC that need to be filled, including representation from: the District of Kitimat, Village of Hazelton, and public representation from Electoral Areas A, D, F, District of Stewart and the Village of Hazelton.

Currently there are 16 unrepresented First Nations communities. Indigenous Services Canada (ISC) is currently working with several First Nations communities to develop solid waste management systems. A representative from ISC declined participation in PTAC, but requested to maintain a high level of involvement in the SWMP. Administration recommends that PTAC may re-solicit for representatives from First Nations communities. Those that decline participation, as well as ISC representatives, will be kept highly involved in the process by including them on a distribution list that receives PTAC agendas, minutes and reports, and by offering to engage community leaders or administration in targeted sessions (i.e., workshops or meetings) regarding issues that may affect their community.



Meeting Administrator, Nicki Veikle (Environmental Services Coordinator), will:

- Call three times for nominations for the Chair of the Public and Technical Advisory Committee;
- Members can nominate themselves or another member;
- Ask nominee to accept the nomination (i.e., willing to sit as Chair of Public and Technical Advisory Committee);
- Call for motions to second each nomination;
- If multiple nominations, as each nominee to state a brief "platform" regarding their qualifications.
- If an election is required, Erin Blaney (Zero Waste Coordinator), a non-voting delegation, will act as Elections Officer. Erin will distribute and collect ballot papers, tally the votes and report the results to the other members.
- Repeat the process for election of Vice Chair of the Public and Technical Advisory Committee.

Once a Chair and Vice Chair have been appointed, the meeting will be turned over to the Chair to conduct the remainder of the meeting according to the agenda.



Next Steps	 Next meeting proposed for February 12, 2019 (Location TBD)
	 Next meeting: Consultation Strategy and public survey
	 Review of technical memo relating to the theme of "Efficiency"