



Solid Waste Management:

Vision for a Sustainable Model
for Yukon Communities

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LIST OF ACRONYMS

AYC	Association of Yukon Communities
CMG	Comprehensive Municipal Grant
BCR	Beverage Container Regulation
BMP	Best Management Practices
DMR	Designated Materials Regulation
EPR	Extended Producer Responsibility
OTOF	Our Towns, Our Futures
PSAB	Public Sector Accounting Board
SOP	Standard Operating Procedures
SWANA	Solid Waste Association of North America
SWAP	Solid Waste Action Plan
SWWG	Solid Waste Working Group
YG	Yukon Government

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All content represents the views of the Association of Yukon Communities (AYC) as expressed at workshops facilitated by Cambio. This document has been reviewed approved by AYC prior to public release.

1. BACKGROUND & RATIONALE

Background

Solid waste management in the Yukon has received a good deal of attention over the past few years, including a Yukon Solid Waste Action Plan in 2009, a Findings Report stemming from the Our Towns, Our Futures (OTOF) process in 2013 and a Yukon Recycling review done by AECOM in 2012 which showed how costly it is to integrate recycling in the territory. These efforts brought forward many essential elements that need to be in place for sustainable, effective waste management around the Yukon.

Throughout these processes, members of the Association of Yukon Communities (AYC) have discussed the issues that affect them, and worked to develop a vision for an overall approach to waste management that would meet the needs of Yukon communities and citizens. At their AGM in May of 2015, AYC members passed a motion to create an AYC Solid Waste Working group “for the purpose of identifying the solid waste needs of each and all Yukon municipalities”. This document presents the results of that work - a vision for a waste management system that AYC members believe will lead to more sustainable, integrated, and effective operations. It is a vision that draws on previous work, and we hope leads to more dialogue among our communities and our partners at the Yukon government (YG).

The Vision

The specific details of AYC’s vision for a more sustainable, integrated and effective waste management system over the next five years are laid out in the rest of this document. The key elements of this vision are:

- Increased user-responsibility for waste management costs
- Community landfills with sufficient resources and complimentary standards
- An integrated approach with communities and YG implementing changes in unison
- A phased approach with doable steps

This strategy document contains **five objectives** (along with suggested steps, timelines and roles) that our members believe will move us towards a more sustainable, integrated waste management system that is based on best practices and modern philosophies.

What Comes Next?

Significant changes to the Yukon waste management system will require changes to policy and allocation of resources by Yukon’s elected officials - territorial and municipal. These people have a responsibility to taxpayers to ensure that their decisions are based on sound information that is carefully considered.

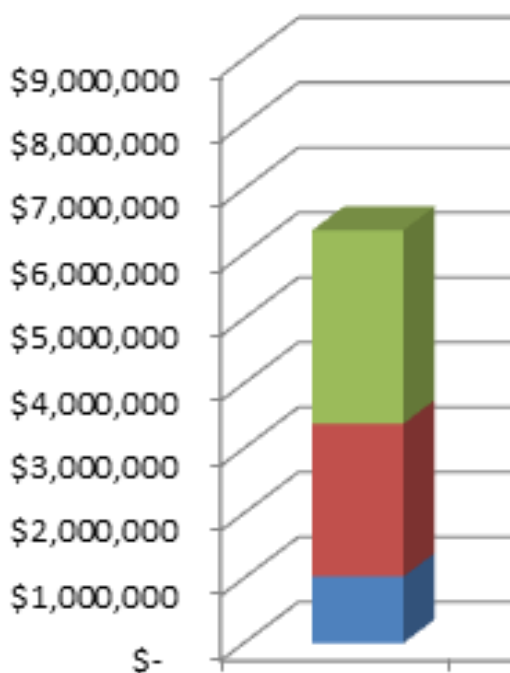
After initial dialogue about the key elements of the vision presented here, AYC’s intention is for the partners involved to identify key information and partnerships that will support responsible decision-making. This may include:

- Specific options scenarios for implementation
- Financial forecasting
- Best practices research, models from comparable jurisdictions
- Engagement with citizens, local businesses, and First Nations

2. THE NEED FOR CHANGE

Current Situation

At present, Whitehorse is able to support its operations through tipping fees and a portion of collection revenue. The vast majority of funding for other community landfills comes in the form of transfers from the Yukon government (YG) and other funding programs. There are only a handful of materials covered under the Beverage Container Regulation (BCR) and Designated Materials Regulation (DMR), which build in the costs of disposal at the point of purchase (an approach referred to as “**Stewardship**”).¹ So the current approach to funding Yukon waste management looks like this, in terms of relative amounts from each source (estimates only for Yukon communities, Yukon government and historical recycling data from the City of Whitehorse diversion credit applications):



Total Waste Management Costs:

Estimated at \$6,332,000

Municipal Revenue: 47%

With the partial exception of Whitehorse, revenue for landfill costs in all other incorporated communities in the Yukon comes from CMG, taxes and other fees collected by the municipality.

NOTE: Municipalities outside of Whitehorse are spending an average of \$175,000 to \$350,000.00 annually on landfill O&M costs

Tipping Fees - 37%

Vast majority through Whitehorse

Stewardship - 16%

Through bottles, cans, containers (BCR) and Tires (DMR)

Extended Producer Responsibility (EPR) is a mechanism for implementing Stewardship programs, where product importers or sellers are required by regulation to include disposal costs in the purchase price, and to pass these funds along to government waste management agencies.

The Organization for Economic Co-operation and Development (OECD) defines “EPR as an environmental policy approach in which a producer’s responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product’s life cycle. There are two key features of EPR policy:

- (1) the shifting of responsibility (physically and/or economically, fully or partially) upstream to the producer and away from municipalities, and
- (2) to provide incentives to producers to take environmental considerations into the design of the product.

Issues With the Current System

Tax Dollars Instead of Users Paying

Rural community landfill operations are funded mainly through property tax dollars, revenue from the Comprehensive Municipal Grant (CMG) received by municipalities annually, and other grant programs such as GasTax, Build Canada, and environmental monitoring funding. Other jurisdictions (such as British Columbia) are moving towards more user-pay Stewardship models and EPR approaches that build disposal costs into purchase prices. This approach encourages more waste diversion, and builds personal responsibility for waste into the system.

Strategy:

- Shift from a tax-based model to a user-pay model through a combination of tipping fees/user fees, DMR and eventually EPR

Inconsistent Staffing and Tipping Fees

Most rural community landfills are currently not staffed, which severely limits the ability to manage incoming waste and to levy tipping fees/user fees as a way to encourage diversion and finance operations. Only half of Yukon communities currently have tipping fees/user fees. Rural landfills and transfer stations operated by YG do not have tipping fees/user fees, which can lead to citizens “dump shopping “ and dumping for free. This undermines the waste diversion practices we hope to promote.

Strategies:

- Staffing at municipal landfills to support waste diversion, control waste streams, and implement tipping fees/user fees
- Comparable tipping fees/user fees at all Yukon waste facilities

Peripheral Dumping

Some rural landfills do attempt to enforce tipping fees, which often leads to peripheral dumping at YG-operated transfer sites (where there are no fees), roadside pull-outs, and even illegal dumping. For example, the Marsh Lake transfer station costs YG about \$700K/yr to operate, or almost a third of the cost of the entire City of Whitehorse landfill’s annual budget of \$2.1 million

Strategy:

- Communities and YG to implement staffing based on capacity and/or service requirements and tipping fees/user fees in unison to discourage peripheral dumping

Liability Costs

All communities do not have the resources to shoulder the costs of closing a landfill at the end of its life, in keeping with PSAB requirements around liabilities for waste management. Further, it is

not clear how communities and YG share responsibility for the liability of landfills. Some landfills pre-date the existence of municipal councils, and can include “legacy waste” that is not fully known. This is a potentially huge cost to Yukon taxpayers, and the ability to divert waste and manage incoming waste is essential for lengthening the life of landfills and preparing for closure.

Strategies:

- Public education about the reality of liability costs
- Add new materials to the BCR and DMR and institute comparable tipping fees/user fees around Yukon
- Ensure that waste management facilities have adequate staffing based on capacity and/or service requirements to manage waste streams and apply tipping fees/user fees

The bottom line is that Yukon communities are struggling to operate their landfills in ways that will be financially sustainable over the long-term. Most communities have limited tax bases, and insufficient usage for tipping fees/user fees to significantly support operations. Meeting new regulatory requirements, monitoring environmental impacts (e.g. groundwater contamination) and offering modernized services (like recycling and composting) is increasingly expensive.

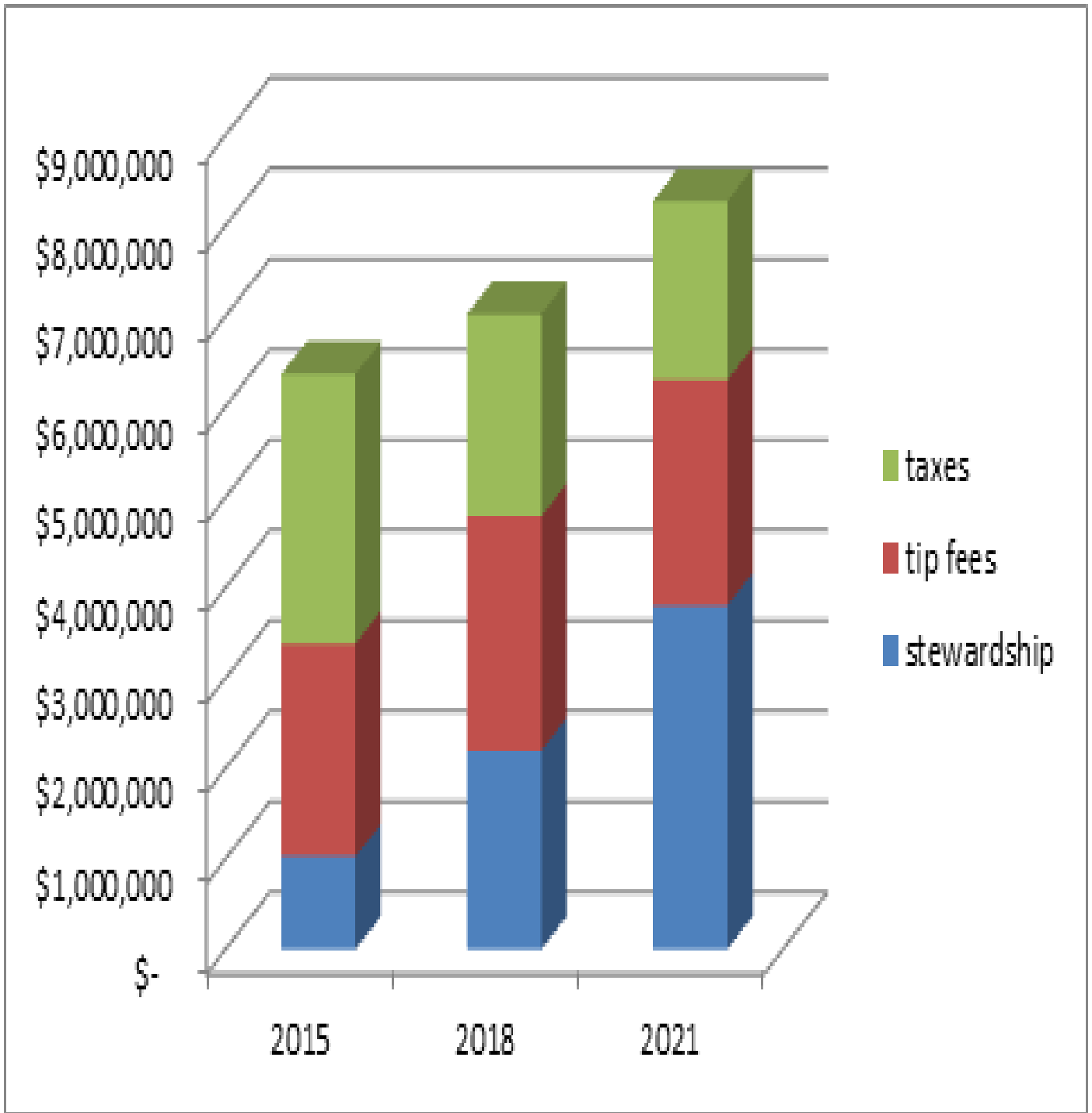
Strategy:

- Generate more revenue and reduce long-term costs by shifting towards a user-pay system that encourages diversion; recoup more disposal costs at the point of purchase through Stewardship and EPR programs

Changes Envisioned

AYC members support a shift in the coming years towards a model that increases user responsibility for the costs of waste management through increased Stewardship, and comparable and consistent fees. The graph below expresses this shift using estimates based on information provided by Yukon Communities, Yukon Government and historical recycling data from the City of Whitehorse diversion credit applications. Note the following key points of this shift, envisioned over roughly five years:

- Revenue generated through Stewardship triples
- The total amount of tipping fees/user fees levied has only a modest increase at first, and it begins to drop as Stewardship programs help increase diversion
- \$ 1 million/yr in tax revenue is freed up for other purposes (such as landfill closure planning)



The Challenges of Change

Fees for Users

New fees are never popular with citizens, and therefore difficult for elected officials to champion. This is why education about liability costs and the amount of tax dollars currently funding community landfills is essential. Further, public dislike of increased fees is a strong motivation to implement Stewardship programs more quickly, as consumers feel much better about paying disposal costs at the time of purchase than at the time of disposal.

Staffing Costs

Staffing based on capacity and/or service requirements for waste management facilities is an up-front investment that is essential for enabling more diversion and liability management.

AYC suggests that this investment be shared between municipalities and Yukon government, with relative amounts to be determined. AYC envisions that over time, revenue generated from the combination of fees collected through Stewardship and EPR plus tipping fees/user fees will offset the costs of increased staffing. Further, staffing will enable management that extends the life of landfills and reduces closure costs, both of which are huge long-term benefits to tax payers.

Community Support

Education to build community support is essential if political leaders are to implement new approaches to waste management, particularly if they involve materials deposits and fees. In Whitehorse and some outlying communities, much work has been on community education regarding the Solid Waste Action Plan and Zero Waste initiative, which could serve as a starting point for all Yukon communities.

3. GUIDING PRINCIPLES

The proposed changes to Yukon’s waste management system are founded upon an important set of guiding principles that encompass emerging best practices and community values:

1. Responsibility

- Everyone is responsible for the waste they generate, and contribute to disposal and management
- We put in resources to waste management today to ensure long-term sustainability

2. Fairness

- We move towards more user-pay and stewardship approaches, and away from general tax-based models of funding waste management

3. Coordination and Consistency

- Yukon waste managers at different levels - Territorial, regional, and municipal - all implement compatible approaches based on a shared vision
- Gradual and steady steps are taken towards milestones that support the shared vision

4. Flexibility

- Specific needs and circumstances of communities are accommodated within the shared vision

5. Community Involvement

- Education programs bring citizens the information they need to understand and support waste management efforts

4. OBJECTIVES

AYC members believe that the specific objectives outlined below will help Yukon communities take the first steps towards a more effective, sustainable waste management system. The steps to achieve each objective include general timelines², and roles for communities, YG and AYC. In some cases, there are specific roles for each partner, while in other cases there is simply an overall need to work in partnership to address certain topics.

These objectives all have clear links to the 2009 Yukon Solid Waste Action Plan and the 2011 OTOF Solid Waste Working Group findings report, which are noted for each one.

1. Staffing at All Yukon Waste Management Facilities

Steps	Timeline	Roles
<ul style="list-style-type: none"> ○ Identify costs for each facility 	Short	<ul style="list-style-type: none"> ➤ <u>Comm</u>: Develop picture of current staffing based on capacity and/or service requirements ➤ <u>YG</u>: Identify staffing based on capacity and/or service requirements at their facilities
<ul style="list-style-type: none"> ○ Staff training to meet qualifications (e.g. SWANA) 	Short	<ul style="list-style-type: none"> ➤ <u>Comm</u>: Identify training needs; develop standards for Job Descriptions ➤ <u>AYC</u>: Provide funding for training ➤ <u>YG</u>: Provide courses through partners (e.g. Yukon College); coordinate participation
<ul style="list-style-type: none"> ○ Coordinate with Stewardship programs for efficiency 	Med	<ul style="list-style-type: none"> ➤ <u>Comm</u>: Identify staff & infrastructure needs ➤ <u>AYC</u>: Liaise and coordinate between partners ➤ <u>YG</u>: Ensure a flexible policy framework to support Stewardship

Links to Previous Work:

SWAP 2009: Improve Site Management

OTOF Findings 2013: Waste Diversion, Fees & Charges, Landfill Liability

² Short = 1-2 years, Med = 3-4 years, Long = 5 years

2. Comparable Tipping Fees Throughout Yukon

Steps	Timeline	Roles
<ul style="list-style-type: none"> ○ Develop and evaluate various cost recovery models and analyze different waste streams, pressure points 	Short	<ul style="list-style-type: none"> ➤ <u>Comm</u>: Identify overall landfill costs ➤ <u>AYC</u>: Provide costing template; compile community data ➤ <u>YG</u>: YG could also figure out their costs for their landfills/transfer stations they operate and identify tipping fees and compare to municipal tipping fees. First nations and mining camps will also need to be consulted.
<ul style="list-style-type: none"> ○ Create tipping fees/user fees legislation and bylaws 	Short	<ul style="list-style-type: none"> ➤ <u>YG</u>: Create legislation requiring tipping fees/user fees at Yukon waste management facilities³
<ul style="list-style-type: none"> ○ Coordinated implementation of comparable tipping fees/user fees throughout Yukon 	Med	<ul style="list-style-type: none"> ➤ <u>Comm</u>: Implement fees at all landfills ➤ <u>YG</u>: Implement fees at all LAC landfills and transfer stations

Links Previous Work:

SWAP 2009: Improve Site Management, Regional Coordination, Integrate Yukon Government Waste Disposal and Recycling Programs

OTOF Findings 2013: Fees & Charges, Peripheral Users, Waste Diversion, Landfill Liability, Financial Sustainability

³ This is a similar approach to what was done with non-smoking bylaws for Yukon communities

3. Add Materials to BCR and DMR

Steps	Timeline	Roles
<ul style="list-style-type: none"> ○ Create a priority list of materials to be recommended 	Short	<ul style="list-style-type: none"> ➤ All parties in partnership
<ul style="list-style-type: none"> ○ Expand DMR and BCR list of materials through legislation change 	Med	<ul style="list-style-type: none"> ➤ Comm: educate public on stewardship ➤ AYC: determine how stewardship will integrate with current waste & recycling systems ➤ YG: implement legislative change based on priority and work on expanding DMR and BCR list ASAP, possibly follow BC list
<ul style="list-style-type: none"> ○ Update relevant bylaws 	Med	<ul style="list-style-type: none"> ➤ Municipalities to create or revise Solid Waste bylaws as necessary to show unified tipping fees ➤ YG: develop similar waste management requirements for unincorporated communities
<ul style="list-style-type: none"> ○ Partner with BC and AB on Stewardship - mirror BC or AB legislation for EPR 	Long	<ul style="list-style-type: none"> ➤ AYC: research options for EPR implementation in the territory in collaboration with YG

Links Previous Work:

SWAP 2009: Enhancing Our Efforts for Recycling, Waste Reduction and Diversion

OTOF Findings 2013: Extended Producer Responsibility, Financial Sustainability, Landfill Liability

For Example:

The following is a list of materials currently covered under British Columbia designated materials or containers regulations:

- Antifreeze, used lubricating oil, filters and containers
- Appliances
- Batteries and cell phones
- Beverage containers
- Electronics (“e-waste”): computers, televisions, audio-visual
- Gaming equipment
- Hobby & craft materials
- Lamps and lighting equipment
- Lead-acid batteries
- Outdoor power equipment
- Paints, solvents, flammable liquids, gasoline and pesticides
- Pharmaceuticals
- Power Tools
- Sports and exercise equipment
- Thermostats
- Tires
- Toys - electronic and electrical

4. Develop a Liability Risk Management & Strategy

Steps	Timeline	Roles
○ Review Morrison Hershfield report to ensure accuracy of closure and post-closure liability figures	Short	➤ All parties
○ Determine a shared approach for environmental liabilities between YG and communities	Short	➤ All parties
○ Develop environmental monitoring program	Med	➤ <u>YG</u> : Engage consultant to help develop program and tailor to specific landfills
○ Develop and implement common BMPs and SOPs, including training	Med	➤ <u>Comm</u> : Ensure implementation of BMPs and SOPs ➤ <u>YG</u> : Seek partners to develop and offer training

Links Previous Work:

SWAP 2009: Working with communities to develop measurements and targets for waste reduction and ongoing monitoring and review; Assessing possible future impacts on waste management;

OTOF Findings 2013: Landfill Liability, Financial Sustainability

5. Implement Education Programs

Steps	Timeline	Roles
<ul style="list-style-type: none"> ○ Consolidate education materials (Recycling, Reuse, Reduce, Zero Waste, Stewardship) 	Short	<ul style="list-style-type: none"> ➤ All parties in partnership
<ul style="list-style-type: none"> ○ Design and deliver PR materials about the “hard facts” of solid waste and the Yukon plan 	Short	<ul style="list-style-type: none"> ➤ <u>YG</u>: Engage consultant using recycling fund revenues
<ul style="list-style-type: none"> ○ Engage youth, schools, community champions and business leaders to build support 	On-going	<ul style="list-style-type: none"> ➤ YG and municipalities to distribute PR materials provided by YG
<ul style="list-style-type: none"> ○ Design a package specifically for political leaders - engage with election cycles 	Med	<ul style="list-style-type: none"> ➤ YG work with AYC to provide info to councilors which can be presented at council orientation sessions or AGM

Links Previous Work:

SWAP 2009: Working with communities to develop measurements and targets for waste reduction and ongoing monitoring and review; Exploring potential partnership and business opportunities

OTOF Findings 2013: Education and community involvement

5. APPENDIX: AYC Solid Waste Working Group Participants

NAME	COMMUNITY	POSITION/ROLE
Cory Bellmore	Carmacks	CAO
Ian Dunlop	Faro	CAO
Margrit Wozniak	Mayo	CAO
Shelley Hassard	Teslin	CAO
Monika Schitteck	Haines Junction	CAO
Christine Smith	Whitehorse	City Manager
Bryna Cable	Whitehorse	Environmental Coordinator
David Albisser	Whitehorse	Manager of Water and Waste
Dave Hatherley	Haines Junction	Public Works Foreman
Cole Hunking	Teslin	Public Works Foreman
Norm Carlson	Dawson	Superintendent Public Works
Tony Radford	YG	Community Operations Supervisor
Bev Buckway	AYC	Executive Director
Laura Eby	AYC	Manager of Operations
