City of Kelowna and UBC Okanagan Collaboration

Theme Area:

- Solid Waste Management and Recycling

Challenge Statement:

The City of Kelowna is seeking innovative solutions for how the Region can manage and recycle large volumes of construction and demolition waste and how that could translate into City policy to ensure that all construction and demolition waste is effectively and efficiently recycled. The primary focus would be on the re-use of clean or painted/treated wood, drywall, and durable hard plastics.

Context:

The landfill has a particular issue with the efficient recycling of deconstructed housing and commercial building waste products. Up to 40% of the landfill intake is from these types of materials. However, the quantities are not large enough to efficiently recycle them due to the high cost of storage and transportation.

- Gap: High percentage of landfill waste is deconstructed housing, but overall waste volumes are too low to efficiently and cost-effectively recycle these products.
- Timeframe, location, and trend: The problem is ongoing, and the trend continues based on building deconstruction in and around Kelowna
- Impact: A significant amount of landfill operators' time and effort is utilized in trying to resolve the issue. Cost is also a significant factor to facilitate the recycling of these materials. This influences the landfills' environmental impact.
- Importance: To effectively and efficiently recycle deconstructed building waste, and manage costs to the landfill.

Additional tips:

- Landfill involvement in City or larger-scale private building demolition in order to understand the impact on the landfill could aid planning toward recycling.
- Development of City policy regarding recycling of building deconstruction waste could help manage overall waste management and may drive the private industry to benefit commercially from collective waste.
- Policy development could drive a more efficient and effective building waste recycling industry locally and regionally. This would have a significant impact on the overall useful recycling of building waste, growing jobs and business locally and regionally, and meeting local desires to manage building waste effectively.

Example:

- Drywall is a heavy material and is expensive to move to a recycling center. Although 40% of the Glenmore landfill is building material waste, the still small volumes of drywall do not make it cost-effective to move it to a recycling center for proper disposal. Other building materials are similar in weight or are bulk materials that face similar restrictive issues. Other landfills have attempted longer-term storage to build up enough product to allow for efficient disposal but that has its own issues in space and time constraints and shipping or larger volumes also incurs additional costs.

Contact:

For additional information or any questions on this specific Challenge Statement, you may contact:

- Scott Hoekstra, Landfill and Compost Operations Manager - shoekstra@kelowna.ca
- Kevin Van Vliet, Utility Services Manager - kvanvliet@kelowna.ca

Note: The City of Kelowna has a broad range of assets and infrastructure that may be utilized during the research or application and monitoring of applied solutions, which can be considered and should be identified as part of any proposals.