RBG Remote Waste Management Strategy

RBG will be utilizing a system of **multiple transportable barrels** for human waste that will be **flown out by helicopter** on an as needed basis to a staging area and then driven by truck to be **deposited** at the Revelstoke landfill **septage facility**. The Revelstoke landfill is equipped with a septage disposal facility that can dispose of the human waste at a rate of $45/tonne and this service is available during operating hours for the lanfill.

This practice is common among backcountry huts in remote and sensitive areas and provides a simple and secure solution. Below is a synoptic table of the two most common waste management strategy used in backcountry lodge environments.

BLACK WATER (SEWAGE) TREATMENT as referenced from the Alpine Club of Canada

The ACC has collaborated with Parks Canada to develop best practices and environmentally sustainable technology for mountain huts. Full descriptions of the technologies we have developed and employ in many of our huts are available on the BeeSolutions website.

Black water (human sewage) consists of fecal waste, urine and toilet paper. The primary objectives of a black water waste management system are to control pollution on site and prevent disease through human contact.

What most operators of backcountry facilities are looking for is a waste management strategy that:

- is functional (it works) and reliable
- uses the least amount of energy
- requires the minimum amount of attention
- has minimal safety risk for users and maintenance staff during servicing
- is robust enough to withstand periods of high use and long periods of vacancy
- has a low environmental impact
- is user friendly

Comparison of Human Waste Treatment Technologies

Technology	Method used to eliminate pathogens	Output product and container	Energy source and quantity	Operating temperature	Maintenance requirements	Odour Issues?	Potential issues
Barrel fly-out	Treated at municipal waste treatment plant	Raw sewage collected in barrels on site	Helicopter and truck to transport barrels	All temperatures	Build toilets that are helicopter accessible, change barrels when full, fly-out barrels	Yes. Fan can help eliminate odours	Helicopters are expensive Health issues for handling and transporting barrels
Incinerating Toilet	Burn pathogens	Sterile ash, no nutrients remaining, no fertilizer potential	Propane or electricity 100 lbs propane per 500 uses	All temperatures	Trigger incineration cycle every 60 uses and clean the burner	No. Closed chamber during burn guarantee against odours	Fuel consumption is considerable, but may reduce helicopter flights compared to fly-out method