

Progressive Stewardship of Mountain Ecosystems: Next Practices for Sustainability

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Waste Management Focus Area

Prepared in partnership with Revelstoke Community Connections and Miranda Murphy, M.A.

The Vision

The vision for waste management is to reduce the amount of waste generated by an operation, and responsibly and efficiently manage the disposal of waste so it does not impact the surrounding environment.

Background Information

Waste management is a double-sided focus area. On one hand, waste management refers to the management of different types of waste after they are produced. However, waste management also includes the opportunity to reduce the amount of waste produced overall. Given the remote location of most helicat operations, many supplies must travel by road or helicopter to reach the lodge, particularly during winter operations. Efficiency in waste management also creates efficiency in areas such as energy use and transportation costs.

For the purposes of this document, waste management will refer to solid wastes, food wastes, sewage and water wastes. By managing waste appropriately and efficiently, helicat operators can ensure there are no direct impacts from waste on the environment and that they reduce the indirect effects of transporting unnecessary waste.

Sustainability Standards

Waste Management Act

B.C. Ministry of the Environment

- Part 2, Section 3
 - (1) For the purposes of this section, the conduct of an industry, trade or business includes the operation by any person of facilities or vehicles for the collection, storage, treatment, handling, transportation, discharge, destruction or other disposal of waste.

- (2) Subject to subsection (5), a person must not, in the course of conducting an industry, trade or business, introduce or cause or allow waste to be introduced into the environment.
- (3) Subject to subsection (5), a person must not introduce or cause or allow to be introduced into the environment, waste produced by any prescribed activity or operation.

Resources:

Waste Management Act

http://www.bclaws.ca/civix/document/id/consol2/consol2/96482_01#JD_RSBC96-482-003

Waste Management B.C.

<https://www2.gov.bc.ca/gov/content/environment/waste-management>

Next Practice Guidelines

Solid Waste

- Create a purchasing policy that looks at the following factors for purchase:
 - Reduce the amount of waste produced by or contained in an item
 - Bulk availability
 - Use of recycled materials for production
 - Longevity and ability of product to be repaired
- Purchase local whenever possible to minimize waste packaging and transportation through the supply chain.
- Put in place a comprehensive recycling program.
- Put in place a hazardous materials program to deal with hazardous waste.
- Minimize disposable items used by providing guests with reusable containers for food and drinks.
- Educate guests about the importance of not littering.
- Implement a program where used items, such as bedding and furniture are donated.
- Conduct a regular waste audit asking the following questions:
 - What is being generated as waste?
 - Where is each type being generated?
 - When is waste generated?
 - How much is generated?
 - Why is it being generated in the first place?
 - What opportunities are there to reduce and improve the handling of waste?

Food Waste

- Plan food purchases appropriately to reduce unnecessary purchases and transport to the lodge.
- Plan menus to be flexible so leftover food can be used in other meals before it expires.

- Donate food that is still fit for consumption, but will not be served to guests or staff. The principle behind recovering food is to decrease the amount of food thrown in the garbage while supplying guests with meals at operations' lodges. Instead of throwing out food that is fit for consumption, but not fit for serving to guests, the amount of food thrown out can be decreased while increasing the quality, variety and nutritional content of food donations. Under the Food Donor Encouragement Act, liability protection is provided for operations able to donate food to local community programs, as long as foodsafe requirements are followed. There are numerous food security programs around British Columbia. Please check with a town or city closest to your lodge to discuss a partnership of providing food to a food security program.
- Purchase pigs or chickens to keep at backcountry lodges to consume food waste (while appropriately securing their enclosures against wildlife).
- Implement an onsite composting program to minimize food waste that needs to be transported out from the lodge.

Resources:

Food Donor Encouragement Act

<http://www.bclaws.ca/civix/document/id/lc/billsprevious/2nd36th:gov10-1>

Food Banks Canada – Safe Food Handling Standards

https://www.foodbankscanada.ca/getmedia/58114981-c2c6-4f8f-925d-4a498be2aedf/FINAL-Safe-Food-Handling-Standards_Sept_29_2010.pdf.aspx?ext=.pdf

Sewage and Wastewater

- There may be different municipal or regional district requirements to managing installation of a septic system depending on the location of an operation's lodge. It is important to research these requirements before installing a system.
- Engage a qualified engineer to design a system appropriate for your lodge's current and future requirements.
- Follow guidance from the province of British Columbia Sewerage System Standard Practice Manual when designing, installing and maintaining a septic system, sewage treatment system or composting toilets as this manual was designed pursuant to the Sewerage System Regulations and Public Health Act.
- Develop a maintenance and operations manual detailing the requirements of the system, regular maintenance schedules and emergency response instructions in case of a system failure.
- If your system depends on different processes, consider installing alarm systems to alert staff if the system is not functioning properly to avoid larger system malfunctions if left undetected.
- Educate guests on the importance of proper septic health and not putting garbage and hazardous items down the toilets and drains.

Resources:

Sewerage System Standard Practice Manual

<https://www2.gov.bc.ca/gov/content/environment/waste-management/sewage/onsite-sewage-systems/sewage-system-standard-practice-manual>

Water

While many backcountry lodges are fortunate enough to have direct access to water runoff in streams, the supply of these streams can often change with different weather. Having a plan in place to conserve water can reduce overall demand in case supply is limited and reduce the cost of water treatment for consumption and sewer systems.

- Implement systems to collect reliable and renewable sources of water, such as rainwater collection and storage.
- Reduce water consumption by installing low-flow showerheads, toilets, and faucets.
- Check regularly and repair leaking taps, valves, pipes and toilets.
- Educate staff and guests about water conservation and encourage them to reuse linens and towels and minimize their water usage.
- Implement grey water recovery systems to reuse water for purposes such as flushing toilets to reduce overall water usage.

Resources:

Water Conservation Guide for British Columbia

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-conservation>

Conclusion

Waste management is an important topic for the helicat industry as reducing waste can directly impact the environment as well as being a useful method to reduce overall costs for an operation. If operations rely on flying or driving supplies in and waste out of the remote backcountry, the cost can increase substantially. Reducing waste is a necessary step in working towards sustainable operations and aiming at one day looking towards waste-free operations.