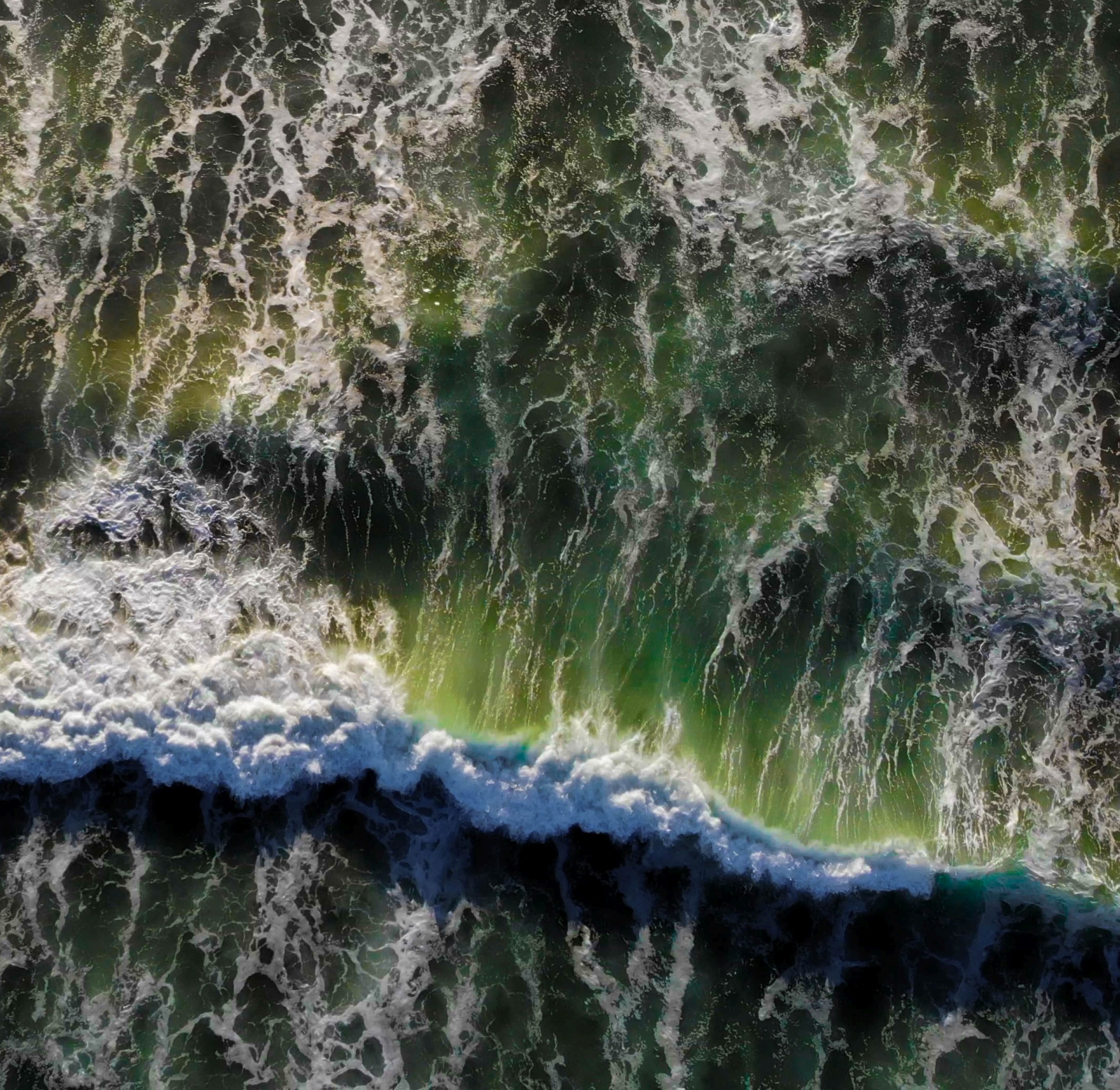




CODE OF CONDUCT

BC Marine Trails - Online Classroom

Unit 3 - Human Waste Management

Human Waste Management

Learning Objectives

1. Compare the three BC Marine Trails approved human waste management techniques
2. Review the specific procedures for each waste management technique
3. Differentiate which site characteristics determine the preferred waste management technique



On-Site Toilet	Pack It Out	Tidal Flush	Cat Holes
Maintained recreational and parks sites where there is heavy usage. <i>Always the number one pick</i>	Ecologically sensitive areas (clam gardens, shellfish areas, midden sites). <i>First pick for sites without toilets</i>	Sites where tidal flush (water movement, wave action) will rapidly break down feces. Sites where there is insufficient soil depth, or proximity to fresh water. <i>Second pick for sites without toilets</i>	Sites where there is sufficient soil depth to dig 15 to 20 cm deep; a minimum distance of 60m from fresh water sources. <i>Not recommended</i>

Introduction

BC Marine Trails Human Waste Directive:

When a toilet is unavailable, the best practice is to dispose of all human waste below the high tide line and ensure tidal flush sweeps it out to sea. Alternatively, where shellfish will be contaminated, pack out or discharge human waste mid-channel.

If you have ever been on an overnight sea kayaking trip, you know the following to be true: Kayakers love to talk about how and where to poop... This section will provide you with all the ins and outs to show your kayaking friends that you are the most talented backcountry business doer.

Human waste contamination can quickly threaten group health, site capacity and public access. Backcountry users need to be aware of many factors to limit the impacts of their human waste management. These factors include:

1. The knowledge of the suitability of a beach for a marine tidal/wave flush to remove waste
2. What the required tidal flush is to be deemed suitable for the tidal flush method
3. What level of use a beach can sustain with each form of waste disposal
4. The best practices to undertake for each form of disposal

Disposing of human waste on the coast depends on the type of site you are visiting. Not all campsites and rest stops are suitable for all types of waste disposal.

In this unit, we will revise the sustainable options for waste removal. Each method has specific times when it is functional. Certain methods can be detrimental to the environment if used on the wrong site. Below is a detailed breakdown of each method with the associated site characteristics required for use.

Historically, low-impact camping courses have taught four disposal methods for human waste: upland in cat holes, **intertidal below the high tide line, packing it out** or **toilets**. However, BC Marine Trails only endorses three of these methods. Below we will break down each method.

BEST PRACTICES



Cat Holes

Cat holes are holes dug in the upland. Typically these holes are used to bury waste deep enough to encourage quick decomposition. The conditions for proper use vary significantly between site and climate.

In a marine environment, BC Marine Trails **never suggests using cat holes**. Many old-school low-impact camping courses taught this method. Our research suggests that this method is inappropriate for coastal use. Below are the many impacts that make cat holes a non-viable option:

- Using cat holes at busy backcountry sites quickly exceeds the site's natural capacity to break down human waste.
- Coastal soil is quite acidic, and heavy rains quickly leech waste into nearby water sources and delay decomposition.
- Toilet paper is often left buried alongside solid human waste.
- Shallow coastal soils are frequently not deep enough to quickly render human waste harmless.
- Viral bacteria stay alive for up to 51 weeks in shallow soils and can harm the surrounding environment and visiting groups.
- Digging cat holes to dispose of human waste can disturb cultural and heritage sites and is environmentally damaging. This is especially an issue in high-traffic areas where sites can reach or exceed capacity.

Instead of cat holes, BC Marine Trails suggests the following three waste disposal methods:

Toilets

Whenever possible, use toilets provided. If a toilet is unserviceable, please submit a **site condition report** to the BC Marine Trails so we can notify the respective land manager.

Most backcountry toilets are user maintained. Please leave the toilet in a better shape than you found it. Only dispose of human waste and toilet paper in the toilets.



Lowest Intertidal Flush

While environmental degradation cannot be entirely avoided when leaving human waste behind, tidal flush is often the lowest impact. The ocean can quickly break down human waste and render intestinal bacteria inert. However, **only certain sites are appropriate for intertidal waste disposal**. Below we list the site characteristics required for this method:

- Sites require sufficient water movement*
 - Look for wave action, surging water, current off points, and high tidal exchanges

**Quantifying enough water movement is difficult. You don't need a raging current. However, you need water movement to ensure solid waste is broken up and dispersed/moved away from areas of use.*

- There must be no shellfish harvesting zones or First Nations' clam gardens nearby
- Dispose of waste 100m away from freshwater streams and clam gardens
- The low tide area is easily accessible to you
- Deep bays with low water flow are **not suited** to the intertidal flush method; however, you can overcome low water flow bays by walking to more exposed points where water flow is better





Waste disposal in the intertidal zone can be an uncomfortable experience for new backcountry users. There can be limited privacy, difficult and slippery conditions to maneuver and fewer comforts than at home. However, if you follow the methodology below, you will be a pro in no time and leave minimal impact!

1. When you arrive on a beach/shore as a group, determine if the site is appropriate for intertidal waste removal.
 - a. Adequate tidal/wave action
 - b. Clam gardens will not be contaminated
 - c. Accessible low intertidal zone
2. Designate a bathroom zone in the lowest intertidal zone, far from the camping area, that offers some privacy.
3. For larger groups/extended stays, use an upright stick to designate the disposal spot. As group members dispose of waste, move the stick to notify users where to avoid .
4. Come prepared to the disposal zone with your preferred type of backcountry toilet paper!
 - a. A few types of backcountry TP options that leave no impact:
 - i. Seaweed
 - ii. Smooth clamshells
 - iii. Salal leaves
 - iv. Toilet paper and a lighter to ignite after use
 - v. Backcountry bidet
5. Dispose of your waste as close to the low tide line as possible.
6. Mark solid waste with an upright stick (if available) to help other group members avoid contamination.
7. Wash your hands with biodegradable soap in the ocean water or use hand sanitizer.
8. Watch as the tide comes up and the power of the ocean breaks up your waste.



Image Credit: Andrew Woodford www.skills.ca



Pack Out

When a toilet is unavailable, and the site does not have the capacity to handle intertidal flush removal, pack out your waste. Several different methods are now commercially available for packing out human waste. Some methods render the waste inert such that it may be disposed of with regular trash after the trip. Some setups include a comfortable toilet seat and a small shelter.

This method requires some research before your trip. Purchase and bring along a pack-out system if you visit sensitive ecosystems or calm paddling waters with no tidal movement. Packing out has many advantages, including:

- Most eco-friendly means of waste disposal
- Toilet can be located wherever is most appropriate
- Toilet seat and shelter help remove the stigma of pooping in the woods by recreating modern comfort
- Shelter provides privacy in exposed areas
- Helps areas with high use levels retain their ecological and capacity limits
- Preserves sensitive and unique coastal ecosystems

Check out these commercially available options for pack-out systems

[Boombox](#)

[Pack out bags](#)

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Potential Health Hazard from Human Waste in Wilderness, Temple et al, Journal of Soil and Water Conservation, November 1982:

https://www.researchgate.net/publication/247215525_Potential_health_hazard_from_human_waste_in_wilderness

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GWAIL HAANAS NATIONAL PARK RESERVE AND HAIDA HERITAGE SITE Management Plan for the Terrestrial Area

[https://www.pc.gc.ca/en/pn-](https://www.pc.gc.ca/en/pn-np/bc/gwaiihaanas/info/coop/~media/9076D083270F4075B52B9E96FB9D19C8.ashx)

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The Malaspina Okeover Coastal Plan

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Etiquette, techniques (cat-holes, pack-out): Trailspace article

<https://www.trailspace.com/articles/backcountry-waste-disposal.html>

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