

Recreation Management Tech Tips

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MODIFIED ROMTEC TRAILSIDE™ COMPOSTER

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Romtec Inc. manufactures a Trailside™ Composter, modeled after the Skagit Composting Bin built by North Cascade National Park. The Trailside™ Composter is constructed of insulated linear polyethylene. Its dimensions are 48 inches by 40 inches by 36 inches and weights approximately 100 pounds. Intended for remote, backcountry use, Trailside™ Composter can handle an average of about 15 overnight users per day (1,150 overnight visitors per season). The units can achieve up to a 75 percent reduction in volume through decomposition/dehydration.



Figure 1—Romtec Trailside™ Composter.

In 1995, the Chilkoot Trail National Historic Site, Yoho National Park (Parks Canada), and Nahanni National Park (Canada) spent between \$36,000 and \$38,000 to airlift human waste out of the backcountry. In 1996, Parks Canada purchased four Trailside™ Composters, to test if they would lower the cost of backcountry waste management. The four units saved \$6,000 to \$8,000 in airlift costs during the first season of operation.

In 1997 Parks Canada purchased an additional four units. All of the units are placed in pairs, with one open to use and one closed to allow further decomposition/dehydration. The maintenance staff suggested an internal mixing device would reduce the workload, as well as being more sanitary than having to remove the lids to rake the waste weekly.

Parks Canada entered into a partnership agreement with San Dimas Technology and Development Center (SDTDC) to design and fabricate an internal mixing device. The modifications consist of lifting straps to facilitate helicopter transport to backcountry locations, a locking mechanism, and a double row of horizontal mixing tines turned by an external crank.



Figure 2—Modified Romtec Trailside™ Composter,
top removed.

The mixing mechanism facilitates mixing the biomass without being exposed to the material, as well as preventing waste from building up under the seat. No additional tools need to be carried to the site. It's easy to use, encourages maintenance of the biomass, and can be accomplished by the recreational users.



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Parks Canada posts a multi-lingual sign near the units along with a container of wood chips or peat moss. The sign describes the compost process, and requests users to add a handful of wood chips or peat moss and turn the crank after use.

When the second unit is full, the first unit (that has been locked for 6 months to a year to allow further decomposition/dehydration) is tipped onto a tarp, and the material is shoveled into containers for transport. The material has little odor and is the consistency of well-composted manure. Depending on local policy, it can be buried or taken out of the area. The material may be scattered in unused forest or grassy areas if the procedures listed in the *Code of Federal Regulations*, 40 CFR 503, and state regulations are followed.

A modified Romtec Trailside™ Composter was sent to Peterson Ranger District, Tongass National Forest, AL for use in a trail crew camp. A crew of eight used it from August 3 through September 20, 1999. The unit was closed and a tarp secured around it to keep drifting snow out during the winter. In spring 2000, the unit was opened and emptied. The contents appeared completely decomposed, with little odor.

The cost of the Romtec Trailside™ Composter is \$1,295 (1998 price, subject to change) plus shipping. The cost of the modifications are approximately \$2,100 (1998 quote from local fabricator). Shop drawings are available from SDTDC.