

Plan ahead and prepare

- For a new trip itinerary, or a one-off private trip, planning and preparation are critical
- Check who owns and manages the water, shores, and access areas, and obtain permits or permission if required
- Check equipment, maintenance, spares and supplies are adequate, including those needed for minimal-impact travel
- For routine commercial operations, make sure environmental conditions are incorporated in contracts with suppliers
- Check that guides have adequate environmental training and know how to pass it on to clients
- Make sure that clients have enough pre-trip information about minimal-impact practices

Washing up and putting the garbage out

- Pans, cutlery and crockery should not be washed directly in the river, especially for low-volume rivers in national parks
- Use only biodegradable detergent
- For best hygiene a four-bucket washing-up system is standard: pre-wash, hot detergent, hot rinse, cold bleach
- Wash well away from the river, since detergent, bleach and food scraps can all affect water quality and aquatic plants and animals
- Pour used washing-up water through a fine-mesh strainer to remove small food scraps, add these to larger scraps from food preparation and carry out
- Pour strained grey water on bare ground, leaf litter or grassy areas, or into a small pit, well away from the river
- Otherwise scatter greywater widely over shrubs etc, where it can't drain back to the river
- Swim without soap or shampoo, especially in clean low-volume rivers in national parks and similar areas
- For washing with soap or shampoo, use buckets or bush showers well away from the river (> 100m)
- Recent research has shown that even swimmers alone can affect water quality in unpolluted low-volume rivers

Green Guide to White Water

*best-practice environmental management for
whitewater raft & kayak tours*

ã Ralf Buckley 1999 ISBN: 0 86857 939 4



CRC for Sustainable Tourism

This is for you!

These guidelines are intended to help commercial whitewater raft and kayak tour operators, guides and clients, as well as private recreational raft and kayak clubs and groups, improve their environmental management and minimise their impact on our rivers and riverbanks.

Environmental management is important for raft and kayak tours because:

- Most rafting rivers have limited campsites, and minimal-impact techniques are essential for client satisfaction as well as environmental protection
- Minimal-impact requirements, permitting and quota systems were first introduced by groups of commercial operators who saw that campsite pollution, litter, fire scars and human wastes were affecting their businesses, profits and income
- Environmental performance is now an important component of permitting systems and river management.

Best-practice environmental management needs:

- Company commitment, including marketing materials and sub-contracts
- Appropriate technology and equipment
- Guide skills using equipment and teaching clients
- Education, both guide-to-client and client-to-client.

Equipment sponsored by:

Perception Aquaterra

Aleeda Surfsuits

Camp with care, tread lightly

- If there is an established campsite, use it
- Otherwise, camp on bare ground, weeds or grasses
- In rainforest, or eucalypt woodlands with small trees, camp on the forest floor - but for safety not under large dead branches
- Avoid digging, landscaping and trenching, except on sand or gravel beaches which are re-formed during floods
- Avoid damaging live shrubs or branches
- Keep group campsites inconspicuous and compact
- Remember: good campsites are found, not made
- Trampling is an issue at campsites, routine lunch stops, put-ins and take-outs
- Where obvious trails exist, stay on them, in single file if narrow
- Except in established sites with defined trails, avoid trampling the same areas, eg between tents and cooking areas
- Vegetation is easily damaged by boots, especially in fragile vegetation such as mountain areas and cold temperate rainforest
- Some environments, however, such as dry eucalypt woodlands and agricultural grasslands, are more resistant to trampling

Avoiding unwelcome companions

- Weeds and pathogens are easily spread in clothing, soil and water
- They are typically invisible at first but can spread rapidly and are generally impossible to eradicate once introduced
- Weed seeds are spread on socks, fleece clothing, and in mud on boots, tentpegs and vehicle tyres
- Plant pathogens include fungi, nematodes, bacteria and viruses, spread in soil and mud
- Human and animal pathogens include bacteria, viruses, and protozoa such as giardia and cryptosporidium, and can be spread in contaminated soil and water
- So it's important for guides and clients to clean all boots, shoes and tentpegs before starting a new trip
- If a trip crosses areas known to contain pathogens, visit uninfected areas first and infected areas later
- If water bottles have been filled in lakes or creeks, empty them before moving to a different water catchment
- Clean vehicles thoroughly between trips to avoid carrying mud into national parks

Food, warmth, light

- Most operators carry lightweight fuel stoves for cooking
- For lighting, use candles in windproof glass holders or plastic bags weighted down with sand
- In fragile areas, carry firepans and blankets to avoid scars
- In cold or low-rainfall areas where trees grow slowly and natural fires are rare, carry firewood in and charcoal out
- In forested areas where natural bushfires are common, campfires and cooking fires have negligible impacts as long as all embers are fully extinguished
- For aesthetic reasons, charcoal and ash should be moved away from campsites, preferably with a fire blanket
- Fire rings blacken stones and are unnecessary
- Fill and level any fire pits before leaving
- If you collect firewood, use fallen branches of small diameter, not standing timber

The loo factor!

- In most situations, best practice requires portable toilets with all waste carried out to a sewage system or for incineration
- Plastic bags in ammo cans and rocket boxes are still widely used
- Stainless steel units with pressure hose attachments are available commercially and used by many larger operators
- Chlorine bleach and other anti-fermentation chemicals are no longer permitted in most incineration and sewage systems
- Some seakayakers use toilets custom-built from plastic pipe, carried on the back deck
- For remote seldom-visited areas and unsupported whitewater kayak trips, on-site disposal of human waste may be unavoidable
- Most national parks currently recommend dispersed individual shallow catholes 10-15cm deep and > 100m away from water
- In wilderness areas, use toilet paper sparingly and bury it well
- At heavily-used campsites in agricultural areas, deep communal pit toilets may be preferable
- Irrespective of the type of toilet, place antiseptic soap and a trickle cup near the toilet, and make sure clients know how to use it

Do the right thing with litter!

- Tell clients not to drop any litter, including food scraps
- Explain that litter can injure or kill wildlife if they eat it or get trapped by it
- Remind clients not to leave toilet paper etc at stops where portable toilets are not set up
- Carry out litter which does not break down rapidly, even if it wasn't from your group
- This includes all metal, foil, plastic, paper, and slow-decomposing food remains such as banana skins and orange peels
- In some environments, small rapidly decomposing food scraps can reasonably be buried away from the river and campsites, as long as animals cannot dig them up, and the sites are rarely used
- In most areas and environments, however, even small food scraps should be taken out with other litter and garbage, and this is the usual practice for most raft operators
- Before leaving the site, all tour members should search carefully for small inconspicuous items of litter such as bottle caps, cigarette butts, used matches, food scraps, packaging scraps, pieces of torn clothing, bent tent pegs, etc, as these are easily overlooked and tend to accumulate at repeatedly-used campsites

Keep it quiet

- A reasonable level of noise depends on the environment
- In otherwise quiet areas, birds, animals and other recreational users are easily disturbed even by a low level of human noise
- In national parks and other quiet environments, portable radios, cassettes and cd players etc with loudspeakers should not be used at all; earphones only
- Similarly, guides and clients should not shout or yell in national parks and other quiet areas, except for safety reasons
- Noise is rarely an issue for small groups of mature clients, but can often be a problem for large groups of younger clients, including those of school and university age, and especially if they are excited or drunk
- Guides may need to make special efforts to keep these clients quiet, explaining reasons and reminding them repeatedly
- Visual sightings of tour groups, especially if they have bright tents or brightly coloured clothes or are moving quickly, can also cause disturbance to birds, animals and other recreational users

Keep learning

- Tour company owners need to recognise the importance of skilled, qualified and experienced guides; most already do
- As in any adventure tour business, raft guides need skills in first aid and safety, health and hygiene, wilderness survival and dealing with clients, as well as technical rafting skills
- For best practice, guides also need environmental knowledge of the area of operations, skills in minimal-impact wilderness travel and camping, and the ability to teach clients about both
- Guides need at least a basic field knowledge of natural history or ecology, as well as plant and animal identification, in order to explain how minimal-impact practices work
- Guides also need to be able to show clients how to use equipment, and how to behave, so as to minimise impacts
- Guides should teach clients the basic "leave-no-trace" principles, also available in minimal-impact booklets from national parks agencies: i.e. Plan ahead and prepare; travel lightly; camp with care; and keep the wilderness wild
- On multi-day wilderness trips, guides can also teach clients how to work out minimal-impact rules for themselves, as follows:
 - observe your surroundings and impacts
 - learn to connect observations and predict impacts
 - imagine you're being tracked and learn to hide your traces

For more information on Green Guides

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