



Public Health Information Sheet

Backcountry Operations Checklist

Back country operations are required to comply with National Park Service (NPS) Public Health Guidelines (DO-83). This checklist is meant to highlight the most important provisions relevant to back country conditions and to provide guidance consistent with existing NPS public health policy. These guidelines are intended to ensure minimum standards for public health are maintained in the backcountry where front country standards are not achievable. Backcountry operations need to comply with all items on this checklist.

POTABLE WATER

- Filtration and disinfection are both required for the treatment of water unless the water is obtained from an approved public water source or is boiled. Water intended to be used for drinking or culinary purposes must be obtained from a source known to be free of chemical contamination and is either:
 - Boiled by bringing to a rolling boil for 1 minute (Add an additional minute for each 1,000 feet above sea level)

OR

- Filtered through an "Absolute" 1 micron filter, or one labeled as meeting American National Standards Institute (ANSI/NSF) (formerly the National Sanitation Foundation) International Standard #53 for "Cyst Removal" followed by disinfection. To disinfect, add 8 drops of unscented bleach per gallon, mix, and let stand for 30 minutes before using.
- Water storage containers are free of contamination when in use and sanitized between each use.

WASTE DISPOSAL

- All human, food and solid wastes are disposed of in a manner consistent with NPS-Public Health guidelines, park policy and all applicable health and environmental laws and regulations.
- In environmentally sensitive areas such as river corridors, etc., human feces and other solid wastes are either disposed onsite in approved facilities or transported offsite to approved facilities.

HAND WASHING

- Guest hand washing station is provided near the toilet facilities and the food service and preparation areas. Air drying of hands is okay for guests.
- Food handlers are provided with disposable towels for hand drying.
- The setup does not involve dipping into the clean water container.
- If potable water is not available, hand sanitizers containing 62% ethyl alcohol is acceptable after first washing with untreated water.
- Hand washing water is either potable (see above) or treated with at least 100 ppm liquid chlorine bleach or another approved sanitizer and let stand for 30 minutes.
- Appropriate disinfectant test strips are used to check disinfectant concentration if potable water is not used.
- Foodhandlers will wash their hands immediately before engaging in food preparation, after using the bathroom, and as frequently as needed to prevent contamination of food and utensils.

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Midwest
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InterMountain
303-969-2922

Desert Southwest
505-988-6040

Pacific West/Pacific
Islands/Alaska
510-817-1375
206-220-4270

Web Resources

NPS Public Health:
http://www.nps.gov/public_health/

CDC:
<http://www.cdc.gov>

State and Local Health Departments:
<http://www.cdc.gov/mmwr/international/relres.html>

FOOD HANDLERS

- At least one guide on each excursion is a certified food handler.
- No persons who are ill will be allowed to prepare food. If a person has a gastrointestinal illness they will be restricted from food handling and water treatment for 72 hours after symptoms have resolved.
- Any food handler who has open unprotected cuts or sores is not allowed to prepare food.
- Food handlers are not allowed to eat while preparing meals.
- Guests are not allowed to prepare or handle foods other than their own.

FOOD STORAGE

- Potentially hazardous food (including raw eggs) are stored at or below 45°F.
- Approved food grade thermometers are available and used frequently to check cooler temperatures. Thermometers should be appropriately calibrated.
- Foods will be stored so that they do not contaminate one another. Whenever possible, raw potentially hazardous foods should be stored in a separate cooler. When this is not possible (e.g. single cooler trips), raw potentially hazardous foods must be stored at the bottom of the cooler in durable leak proof containers. Double bagging is not adequate when storing raw potentially hazardous foods in the same cooler as ready to eat foods.
- Food will be stored separately from cleaning supplies, fuel, human waste receptacles or solid waste receptacles.
- All foods are obtained from an approved source.
- Food stored in water or ice is in water proof packaging.

FOOD PREPARATION

- Food not prepared "on-site" is prepared in an inspected, licensed and approved food establishment.
- Potentially hazardous foods are not kept in the temperature danger zone (45°-135°F) for longer than 4 hours.
- Raw animal foods such as meat, poultry, fish, eggs, and foods containing these raw animal foods are cooked thoroughly (especially ground beef and chicken). The minimum cooking temperatures specified in the NPS-Public Health Guidelines are:
 - Poultry and stuffed meats- 165°F
 - Ground beef and other ground meats - 155°F
 - Beef, pork, fish, eggs - 145°F
- Potentially hazardous food left over from a meal will not be held for re-service.
- Potentially hazardous food will not be prepared in advance in the backcountry and then cooled down for later service.
- All potentially hazardous foods cooked on site will be consumed or discarded within four hours of preparation.
- Foods must be thawed in coolers or as part of the cooking process. Frozen foods must not be left out to thaw at ambient temperatures.
- Raw fruits and vegetables are washed using potable water. (This may be done before an outing in an inspected facility.)
- Cutting boards, knives, etc. used for preparing raw meats, poultry, and fish are thoroughly sanitized before being used for the preparation of other food.
- Approved food thermometers are available and used frequently for measuring food temperatures during cooking and holding.

SANITIZING

- Dishes, utensils, etc are sanitized in a minimum three-compartment arrangement.
- Wash container contains an approved detergent and hot water. The water is changed when it becomes dirty.
- Rinse container contains hot water.
- Rinse water is changed when soap and/or grease begin to accumulate on the surface to prevent carryover into the sanitizing water.
- Sanitizing container contains at least 100 PPM chlorine (1 capful of household bleach per gallon of water) or another approved sanitizer.
- Appropriate test strips are used to check the sanitizer concentration.
- Dishes and utensils are air-dried.
- Food-contact surfaces and nonfood-contact surfaces are sanitized between uses and as frequently as needed.
- Wiping cloths are stored in a 100 PPM chlorine solution (1 capful of household bleach per gallon of water) or in another approved sanitizer.
- Sanitizing water is changed when it becomes dirty.
- Wiping cloths are replaced when soiled.

If you have any questions, please contact a Regional Public Health Consultant, park sanitarian or call WASO Public Health.

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