

HAZARD MANAGEMENT ADVICE FOR BUSH FOR LIFE

The list below covers hazards commonly encountered in the Bush For Life program, and management strategies for these hazards are provided on the following pages. Your Regional Coordinator or BAT Supervisor will work with you in identifying and managing the hazards applicable to your site.

The hazard management strategies are not exhaustive, but represent the minimum safety points to be followed. They are intended to prompt the adoption of safe behaviours beyond, but including, the use of Personal Protective Equipment (PPE). Note that it is beyond the scope of this document to provide first aid details. It is strongly suggested that volunteers look at first aid information on the following websites and consider undertaking an approved and appropriate first aid course.

Red Cross Australia: http://www.redcross.org.au/ourservices_acrossaustralia_firstaid_default.htm

St John Australia: <http://www.stjohnsa.com.au/training-courses>

COMMON HAZARDS FOR BUSH FOR LIFE / BUSH ACTION TEAMS

1. Vehicle Travel
2. Working in Hot / Sunny Conditions
3. Working in Cold Conditions
4. Working in Wet / Foggy Conditions
5. Working in Outdoor / Bushland Areas
6. Working on Remote Sites
7. Working on Steep / Uneven / Slippery Ground
8. Working near Roadsides
9. Working in Public Areas
10. Working near Water
11. Hand Weeding
12. Working with Chemicals
13. Using Cutting Hand Tools
14. Using Power Tools (including cordless drills)
15. Working with/near Brushcutters
16. Using Swinging Tools (e.g. hammer etc.)
17. Litter Collection
18. Biting / Stinging Animals or Plants
19. Working with Soil
20. Manual Handling
21. Bushfires

1. Vehicle Travel

Travel in vehicles is one of the most common hazards involving Trees For Life staff, coordinators and volunteers.

ASSOCIATED RISKS

Potentially fatal road accidents; head impact injury while entering or exiting vehicles; hand crush injuries from vehicle doors; travel sickness; fatigue.

RISK MANAGEMENT STRATEGIES

- Undertake a pre-departure vehicle check prior to departing to, and returning from, each project.
- Comply with all State road laws and road advisory signs.
- Drive in a manner that ensures that all occupants are safe, and feel safe.
- Vehicle occupants must advise the driver immediately if they feel unsafe.
- Wear seat belts whenever a vehicle is in motion.
- Do not carry chemicals or unsecured tools or equipment in passenger cabin.
- Do not allow arms, heads or any other objects to protrude from the vehicle.
- Maintain conditions which optimise the comfort and concentration of the driver e.g. minimise distractions, maintain ventilation, and take regular breaks.

2. Working in Hot / Sunny Conditions

ASSOCIATED RISKS

Dehydration; heat exhaustion; sunstroke; sunburn; skin cancer; cramps; skin irritation; falls; tool use injuries associated with fatigue; bushfire ignition from tool use and hot vehicle engines; potential bushfire exposure

RISK MANAGEMENT STRATEGIES

- When a total fire ban is imposed, no field work activities of any kind are to be carried out in the fire ban area.
- When the local forecast maximum is for 33°C or above, all Bush For Life activities involving volunteers must be cancelled or rescheduled.
- Seed collecting activities involving volunteers may continue if the volunteers are comfortable and in agreement, until the local temperature reaches a maximum of 37°C, after which these activities must be cancelled or rescheduled.
- Staff may continue with essential field work activities up to a local forecast maximum of 39°C, after which these activities must be cancelled or rescheduled.
- Make sure that field work activities conducted on hot days are undertaken in the coolest part of the day. Schedule, or reschedule, work to avoid heavy exertion during the most intense heat of the day.
- Staff must regularly monitor outdoor worksite conditions including the local temperature using thermometers provided by Trees For Life.
- Staff must closely monitor volunteers and other team members for signs of fatigue, particularly those who are less fit, inexperienced or not yet acclimatized.
- Maintain proper hydration levels by carrying adequate water supplies, taking regular drink breaks in the shade, encouraging colleagues to do the same and wearing safe and suitable clothing for the conditions.
- Make sure that you only work in temperatures that you feel comfortable with and do not hesitate to cease work if you feel uncomfortable.

- Take advantage of, or create, shaded work areas.
- Observe the requirement for long trousers and long sleeves, broad brimmed hats, sunglasses and cotton gloves bearing in mind the need to protect against snake bite.
- Provide and encourage the use of a minimum SPF 15 sunscreen on any exposed skin.
- Volunteers must provide us with details of any health issues that may affect them while participating in Trees For Life activities and “In Case of Emergency” information.
- Consideration must be given at all times to suitable emergency exit from risk sites.
- Record and have available CFS Hotline phone number for information on fire bans and location of fires.
1300 362 361

3. Working in Cold Conditions

ASSOCIATED RISKS

Hypothermia; dehydration as a result of excessive perspiration under heavy clothing; fatigue and loss of dexterity leading to falls or tool use injuries.

RISK MANAGEMENT STRATEGIES

- Monitor weather forecasts and on cold days (*i.e.* maximum between 5°C -10°C) structure work to avoid coldest parts of the day.
- Have ample food and fluids available, including warm drinks if possible.
- Carry out simple warm up stretches before commencement, and after breaks.
- Wear layered clothing that enables adjustment to body temperature according to weather conditions and activity level.
- Rotate tasks between team members to avoid prolonged exposure.
- Identify a dry, sheltered area (*e.g.* rock wall, car etc) and use this during breaks or extreme conditions.
- Wear a warm hat (the head is a major heat loss area).
- If temperature is not likely to exceed 5°C, or if you are experiencing difficulty with hand dexterity due to the cold, reschedule work to another day.

4. Working in Wet / Foggy Conditions

ASSOCIATED RISKS

Hypothermia; slipping; poor visibility; chemical contamination from water runoff; fatigue and loss of dexterity leading to falls or tool use injuries.

RISK MANAGEMENT STRATEGIES

- Monitor weather forecasts and reschedule work to another time/day if rain or heavy fog is likely.
- Wear layered, water-repellent clothing that enables adjustment to body temperature according to weather conditions and activity level.
- Wear high-visibility safety vest at all times.
- Have ample food and fluids available, including warm drinks if possible.
- Carry out simple warm up stretches before commencement, and after breaks.
- Rotate tasks between team members to avoid prolonged exposure.
- Avoid usage of chemicals.
- Identify shelter area and use this during periods of inactivity *e.g.* breaks or extreme conditions.

- Structure work to avoid the coldest times of the day.
- Wear a warm hat (the head is a major heat loss area).

5. Working in Outdoor / Bushland Areas

ASSOCIATED RISKS

Cuts and abrasions from tree/bush branches can be common and serious especially when they occur on the face and eyes. Fencing (esp. barbed wire) poses a risk, not only for abrasions but the possibility of tetanus and other infections. Hay fever and asthma (See also Working in Hot / Sunny Conditions; Working in Cold Conditions; Working in Wet / Foggy Conditions; Working on Steep / Uneven / Slippery Ground; Working with Soil; Working in Public Areas; Hand Weeding; Using Cutting Hand Tools; Litter Collection; Working on Remote Sites)

RISK MANAGEMENT STRATEGIES

- Wear layered clothing that enables adjustment to body temperature according to weather conditions and activity level, and sturdy, enclosed footwear.
- Always wear 'rigger' style gardening gloves when working with your hands whether picking up rubbish or weeding.
- Always wear the wrap around safety glasses supplied by TFL when working on a site and participating in all group activities.
- Ensure that you have antiseptic solution/cream and wound dressings handy if in a risk area.
- Always seek medical attention if lacerated by rusty metal, especially barbed wire on a stock fence.
- Carry your hay fever or asthma medication, if necessary.
- If possible, carry a mobile telephone, but also make sure that others know your whereabouts and your expected time of return (in case of signal problems/flat battery).

6. Working on Remote Sites

ASSOCIATED RISKS

Communication difficulties; rescue difficulties in case of injury; loss of direction; threatening situations (see also Vehicle Travel, Working in Public Areas).

RISK MANAGEMENT STRATEGIES

- If possible, work in pairs, and always work in view of another person. If a large site, use an agreed signal to call for assistance from others on site.
- If possible, carry a mobile telephone, but also make sure that others know your whereabouts and your expected time of return (in case of signal problems/flat battery).
- Keep check of time to ensure you return by your designated time.
- Use landmarks for orientation as you move through the site.
- Place an appropriate sign near (but not directly on) a roadway to identify your location to rescue vehicles.

7. Working on Steep / Uneven / Slippery Ground

ASSOCIATED RISKS

Sprain injuries to ankles and knees; impact injuries (bruising, lacerations, fractures, breaks) from slips and falls, especially to backs, legs, hands, wrists, head and face. Exhaustion from climbing banks etc. The nature of the worksite may present a major evacuation problem. (See also Working in Outdoor / Bushland Areas).

RISK MANAGEMENT STRATEGIES

- Avoid any obvious hazards such as slippery logs, loose rocks, steep embankments etc.
- If ground is wet, avoid walking on slopes.
- Where possible and/or ecologically appropriate, remove trip hazards from the work area.
- Flag, or cordon off, and avoid immovable trip hazards.
- Allow at least 2 metres 'visibility space' between team members when walking along tracks.
- Wear sturdy, enclosed footwear with good tread and firmly laced.
- Exercise additional caution when walking downhill, e.g. walk across the slope, have a leader control walking speed.
- Avoid carrying heavy or awkward-sized objects on uneven ground.
- Identify, and closely supervise, fellow workers with pre-existing back, knee or ankle injuries.

8. Working near Roadsides

ASSOCIATED RISKS

Eye and respiratory irritation from fumes and dust; excessive noise; collision or impact injuries; potentially dangerous litter; communication difficulties. (See also Litter Collection; Working in Public Areas)

RISK MANAGEMENT STRATEGIES

- Minimize time spent working near roadsides, and work with care when near roadsides.
- Wear high-visibility road safety vests.
- Wear sturdy, enclosed footwear with good grip.
- Carefully and strategically place signs and/or safety cones to indicate to drivers that there are workers ahead (do not place signs directly on roadway, roadworker signs may only be placed by qualified persons).
- Maintain continual monitoring of fellow site volunteers for straying too close to roads.
- Check that all fellow volunteers understand any warning signals to be used, and that the signals are clear and unambiguous.
- Work upwind and out of fume and dust range.
- Always wear the wrap around safety glasses supplied by TFL when working on a site and participating in all group activities.

9. Working in Public Areas

ASSOCIATED RISKS

Injury to members of public; spray drift; attacks by stray animals; threats or assault (see also Hand Weeding, Working with Chemicals, Working near Roadsides, Working on Remote Sites)

RISK MANAGEMENT STRATEGIES

- Use 'Bush For Life' signs to warn passers-by of your activity.
- Work in pairs and carry a mobile phone, where possible.
- Monitor and observe movements of other people / animals in the area, at a safe distance encourage them to remain clear if necessary.
- Consider possible effect of activity on passers-by and adjoining properties, and revise activity if necessary.
- If threatened by a person / animal, do not confront them but immediately vacate the site (in your car, if possible). If considered necessary, call the appropriate authorities (e.g. in the case of threatening persons, the police on 000 (emergency) or 131 444 (police assistance); or the local council for stray dogs etc.) when at a safe distance.

10. Working Near Water

ASSOCIATED RISKS

Drowning; bites/stings; illness arising from water borne disease or pollution; exposure; sunburn and eye damage (from UV / glare). (See also Biting / Stinging Animals or Plants; Working in Hot or Cold Conditions.)

RISK MANAGEMENT STRATEGIES

- Work well away from water bodies, whether still or flowing.
- Refrain from working on steep, slippery or unstable slopes or banks above water.
- If you can not avoid working near water:
 - Fence, flag or tape off high-risk areas. Factors to consider include depth, current, murkiness, turbulence, difficulty of escape etc.
 - Formulate an emergency response plan that does not require rescuers to enter the water.
 - Ensure there are rescue aids readily accessible e.g. rope, long pole, flotation device. With flowing water, these aids must be positioned downstream from work areas.
 - Identify non-swimmers and ensure that they are deployed away from higher risk areas.
 - Maintain a safe distance for all workers from high risk areas.
 - Have adequate spare clothing (including dry socks).
 - Set up adequate washing and drying facilities e.g. soap, clean water and towels.

11. Hand Weeding

ASSOCIATED RISKS

Spikes and scratches to face and eyes; spike injuries to hands; back and shoulder strains; exposure to chemicals; laceration or impact injuries from cutting tools; hay fever and asthma. (See also Biting / Stinging Animals or Plants; Manual Handling; Working with Soil; Working with Chemicals; Using Swinging Tools.)

RISK MANAGEMENT STRATEGIES

- Always wear the wrap around safety glasses supplied by TFL when working on a site and participating in all group activities. Grass or twig spikes (and chemical splashes) to eyes are common weeding injuries.
- Wear gardening or riggers gloves.
- Carry out simple warm up stretches.
- Minimise strain on back when working at ground level by kneeling or similar.
- If using chemicals, refer to Working with Chemicals below.
- Maintain a safe working space between fellow site volunteers.

- Take regular breaks and rotate tasks to avoid fatigue.
- If tackling large weeds, ensure all other people not involved with the task remain at a safe distance.

12. Working with Chemicals

ASSOCIATED RISKS

Poisoning; toxic reaction; irritation or burning to skin or eyes; back, arm or shoulder strains (see Manual Handling). Some chemicals may also present a risk of fire or explosion.

RISK MANAGEMENT STRATEGIES

- Know the Poisons Information Centre number: 13 11 26 and, if possible, have a mobile phone handy.
- Read and retain the relevant Material Safety Data Sheet/s (MSDS) and chemical label/s (these have been provided for Weedmaster Duo).
- Set up a facility for washing on your site as advised by the MSDS, and ensure it is used by yourself and fellow site volunteers. Ensure adequate water is taken on site to carry out emergency washing.
- Check that there are no leaks in containers, and that any spray equipment is operating correctly.
- Wear the correct Personal Protective Equipment (PPE) as advised on the MSDS. The chemical gloves and safety glasses supplied to all bushcarers should be used as a minimum. Note that the use of certain PPE may accelerate the onset of heat stress.
- Wear appropriate clothing, *i.e.* long trousers, long-sleeved shirt, enclosed footwear and safety glasses.
- Rotate tasks to avoid prolonged periods of exposure.
- Monitor actions of others to ensure appropriate usage in accord with MSDS and chemical label.
- Maintain safe working distance to avoid splash or spray drift contamination.

13. Using Cutting Hand Tools

ASSOCIATED RISKS

Cuts & abrasions; accidental amputations; muscular strains, soft tissue injuries (acute or repetitive).

RISK MANAGEMENT STRATEGIES

- Always wear heavy gloves such as “riggers” when using cutting tools. Wear over chemical resistant gloves if also using herbicide.
- Wear safety glasses to protect eyes against flying chips of vegetation or falling vegetation.
- Wear suitable enclosed footwear.
- Carry out simple warm up stretches before commencement and after breaks.
- Cut with care; make sure all body parts are clear of the cutting edge when using secateurs and saws.
- When using loppers, do not attempt to use on branches larger than recommended, use a saw instead. Do not twist loppers when attempting to cut branches; use another method.
- Do not work repetitively for long periods, rest or rotate activity regularly.
- Maintain tools in good condition; sharpen or replace when blunt.

14. Using Power Tools (including cordless tools)

ASSOCIATED RISKS

Electrocution; hand and foot injuries; muscle strains associated with lifting or overuse; eye injuries from flying particles; headaches and ear damage from noise; cuts and abrasions from cutting/drilling parts; dust which may

trigger respiratory complaints e.g. asthma; burns from direct contact with moving parts.

RISK MANAGEMENT STRATEGIES

- Only experienced or trained users to use power tools.
- Use and maintain tools in accordance with manufacturer specifications.
- Ensure all equipment is in a safe working condition and protected from water, *i.e.*
 - No damaged plugs, leads, sockets or switches;
 - Emergency shutdown procedures in place;
 - Circuit breakers installed (if applicable);
 - Start/stop switches clearly marked, in easy reach of operator;
 - Check that protective guards on tools are attached and effective.
- Wear appropriate Personal Protective Equipment (PPE) e.g. riggers gloves, safety glasses, ear protection, sturdy & enclosed footwear.
- Clear trip hazards from the work site.
- Check all hair is tied back and clothing tucked in, including drawstrings on jackets, hats, etc.

15. Working with/near Brushcutters (using line only)

ASSOCIATED RISKS

Foreign objects in eyes; noise damage to hearing; serious laceration injuries; muscle strains related to overuse and unnatural posture; reduced ability to hear traffic or other hazards; burns from direct contact or use of fuel. (See also Manual Handling; Working near Roadsides.)

RISK MANAGEMENT STRATEGIES

- Ensure that you have completed an approved brushcutter training course.
- Ensure brushcutter is in good working condition before use, and familiarise yourself with starting and stopping procedures.
- Where possible or appropriate, clear obstacles from the work area (refer Manual Handling above).
- Keep all feet and hands well clear of moving parts and wear appropriate PPE *i.e.* glasses, eye/face protection, riggers gloves, safety boots, overalls, ear protection and dust mask.
- Follow correct start-up procedure.
- Stop operating the brushcutter if other people are within 15m.
- If not an operator, keep at least 15m from a brushcutter in use.
- Turn off the brushcutter ignition when not in use, re-fuelling, adjusting line or while removing debris.
- Re-fuel carefully in clear area, and re-start at least 3m away from re-fuelling area.
- Observe fire danger precautions

16. Using Swinging Hand Tools (e.g. hammer etc)

ASSOCIATED RISKS

Impact injuries to feet, legs, hands and head; blisters; back and shoulder strains; foreign particles in eyes. (See also Manual Handling)

RISK MANAGEMENT STRATEGIES

- Wear appropriate Personal Protective Equipment (PPE) e.g. safety glasses, riggers gloves, suitable work

- boots, with reinforced toes, protective headgear if considered necessary.
- Carry out simple warm up stretches before commencement and after breaks.
- Ensure you are familiar with how to use, carry and store tools correctly and safely.
- Maintain safe working distance between fellow volunteers of at least 2 metres for short handled tools (e.g. hammer) and 3 metres for long-handled tools (e.g. mattock).
- Establish a firm footing before swinging tools.
- Rotate tasks even if fellow site volunteers are not experiencing discomfort.
- Adjust the duration of work periods to take account of the physical stature of fellow site volunteers.
- Maintain tools in good condition.

17. Litter Collection

ASSOCIATED RISKS

Hand laceration or spike injuries; bites and stings; injuries related to bending or lifting; spike or gastric related infections including tetanus, hepatitis, HIV *etc.* (See also Manual Handling; Bites and Stings; Working near Roadsides; Working in Hot/Sunny or Cold Conditions.)

RISK MANAGEMENT STRATEGIES

- Set up adequate washing facilities, and ensure they are used by yourself and fellow site volunteers.
- Look carefully at litter items or piles that might be a refuge for snakes or spiders.
- Check objects for spikes or sharp edges.
- Wear gardening or riggers gloves when handling litter; eye protection may also be necessary.
- Do not pick up any objects that are known, or suspected, to be dangerous e.g. syringes. Mark their location and advise TFL staff.
- Maintain a safe working distance to avoid the inadvertent scratching or spiking of fellow site volunteers.

18. Biting / Stinging Animals or Plants

ASSOCIATED RISKS

Snake or spider bites; insect stings; reactions to stinging plants; allergic reactions; bites from other creatures e.g. stray dogs.

RISK MANAGEMENT STRATEGIES

- Conduct a visual inspection of the worksite to identify and flag high risk areas e.g. ant nests, stinging plants.
- Wear appropriate clothing *i.e.* long sleeves and trousers, sturdy footwear, thick socks.
- Tuck trousers into socks, and wear gloves, when working in areas where there is a known, or suspected, higher risk of snake, spider or ant bites.
- Use insect repellent.
- Ensure any fellow workers who have known allergies to bites or stings work in areas away from nest/hive locations.
- Ensure that any person with severe allergies to any bites/stings requiring medication has that medication with them before entering a risk area. Jumping ants and bees are a serious threat to some people.
- Walk with care in suspected snake habitat.
- Seek urgent medical attention immediately if bitten or stung by any potentially dangerous animal or plant, or if reaction occurs to any bite or sting.

19. Working with Soil

Any projects involving the handling of soil (e.g. tree planting, propagation, weeding, mulching). Note that Bush For Life techniques aim to disturb the soil as little as possible.

ASSOCIATED RISKS

Soil borne diseases such as *Legionella*, infection of existing wounds; gastric infections; respiratory complaints e.g. asthma.

RISK MANAGEMENT STRATEGIES

- Identify any team member in higher risk categories (e.g. diabetics, lung or kidney disease or any open cuts or sores) and deploy them on an alternative task.
- Avoid skin contact with wet soil or muddy water, by restructuring the task or by using impervious PPE.
- Cover any minor cuts or scratches.
- Avoid activities that produce dust.
- Wear appropriate PPE e.g. glasses, face masks, gardening gloves.
- Set up adequate washing facilities.

20. Manual Handling

'Manual Handling' describes any activity requiring the use of force exerted by a person to lift, push/ pull, carry or otherwise move or restrain any animate or inanimate object.

ASSOCIATED RISKS

Injuries resulting from a single event of overexertion, or as a consequence of sustained application of force *i.e.* overuse. These injuries are characterised by discomfort or persistent pains in muscles, tendons and soft tissues, most commonly in the back, neck, shoulders and wrists.

RISK MANAGEMENT STRATEGIES

- Use warm up stretches before commencing manual handling tasks and after breaks.
- Reduce the amount of manual handling by:
 - Restructuring the task;
 - Using mechanical aids;
 - Carefully planning the workplace layout;
 - Minimising any heavy materials used and the distance required to be carried.
- Set a conservative weight limit for lifting that takes account of the lifting position, skill and physical stature of the team members.
- Reduce the weights lifted or carried when on uneven / slippery surfaces or when repetitive lifting is required.
- Use proper individual, pair and group lifting techniques (*i.e.* bend the knees more than the back, no back flexing, twisting or leaning, use leg muscles to lift, keep the load close to the waist).
- Avoid tasks, or use mechanical aids, if bending, twisting or uncomfortable postures are necessary.
- Rotate tasks, even if team members are not experiencing discomfort.
- Check that any aids are appropriate for the tasks to be undertaken and properly maintained.

21. Bushfires

Bushfires can be significant life-threatening situations, and volunteers are strongly advised to contact their local CFS Office or look at the CFS website (www.cfs.org.au) for further bushfire safety information.

ASSOCIATED RISKS

Smoke inhalation, eye irritation, dehydration, heat exhaustion, burns from radiant heat, fatalities (see also Working in Hot / Sunny Conditions, Working in Outdoor / Bushland Areas)

RISK MANAGEMENT STRATEGIES

- When a total fire ban is imposed, no field work activities of any kind are to be carried out in the fire ban area.

Before you leave for your site

- Familiarise yourself with bushfire safety information from your regional CFS office, or on their website: www.cfs.org.au
- Be aware of fire danger season and monitor media broadcasts of bushfire warnings (ABC Radio)
- If fire is already underway near your site, do not go to your site.

If you are working on your site:

- No smoking on Bush For Life sites at any time
- Have 'bushfire pack' handy including woollen blanket for each person, extra water, towels and first aid kit
- Wear long trousers, long-sleeved shirts of natural fibres with hat and glasses
- Monitor radio forecasts, and keep an eye out for smoke, & if bushfire in area:
 - Return home if safe to do so and implement your household's bushfire action plan, or
 - Have pre-determined escape routes (with alternatives) to lower-risk areas such as football ovals, shopping centre car parks etc.

If caught on site with bushfire approaching:

- Do not run uphill or away from fire front unless you know of a safe refuge nearby
- Do not run through fire front
- Find an open space, clearing or track
- Clear away as much flammable material as possible
- Cover all exposed skin surfaces (use blanket, hat etc)
- If possible, seek shelter from radiant heat behind e.g. a log, large rock, or depression in ground
- Lie face down on ground as fire front approaches and passes over

CFS Information Hotline

1300 362 361

CFS State Headquarters

8463 4200

Copyright © Trees For Life Inc 2005

All copyright subsisting under the *Copyright Act 1968 (Commonwealth)* resides with Trees For Life Inc. Subject to the *Copyright Act*, the written consent of Trees For Life is to be obtained before reproduction, copying or transmission of the copyright material in any form or by any means. Such written consent may include a requirement for appropriate acknowledgment of Trees For Life.

Trees For Life encourages community organisations to discuss not-for-profit use of this material for community environmental activities by phoning 08 8406 0500 or e-mail: info@treesforlife.org.au