



Phytosphthora



Fire
Response
Team
Handbook
Kangaroo Island

October 2003

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1. **Contacts**

Phytophthora Management Staff

Primary Contact

Bill Haddrill - Bush Management Adviser
DEH , Kingscote

Secondary Contact (s)

Michael Murphy
DEH, Flinders Chase National Park

David Taylor

DEH, Kingscote

Renate Velzeboer

DEH, Victor Harbor

Kangaroo Island Council staff—Portable Washdown Unit

Daniel Rowley

John Fernandez

DEH & CFS Fire Duty Officers

Robert Ellis

Roger Collins

Anthony Maguire

Terry May (KI CFS Group Officer)

2. Introduction

Environment Australia has identified *Phytophthora cinnamomi* as a key threatening process. The Department for Environment and Heritage (DEH) has recognised that *Phytophthora cinnamomi* and other species of *Phytophthora* as a major threat to native vegetation and animal habitat on Kangaroo Island's biodiversity.

Phytophthora cinnamomi, *Phytophthora citricola*, *Phytophthora cryptogea* and *Phytophthora megasperma* have been positively identified on private properties, within parks and along roadsides of central and western Kangaroo Island.

The spread of *Phytophthora species (spp.)* from infested into uninfested areas can occur through the accidental movement of contaminated soil that has adhered to vehicles, grading and earth moving equipment, and boots. It is possible that it may also be transported by pest and native animals. Best practice hygiene for *Phytophthora spp.* is a key concern for DEH on Kangaroo Island. It is therefore essential that effective *Phytophthora spp.* management strategies are developed and hygiene and control practices are strategically implemented across the Island during fire management activities.

Fire management practices such as the construction and maintenance of hazard reduction zones, undertaking planned burns and active management of wildfire risk introducing and/or spreading *Phytophthora spp.* Wildfire management specifically is a high-risk activity for the following reasons:

- The movement of vehicles and people on and off the Island, around the Island, to and from the fire ground and around the fire ground are activities with a very high potential of transferring *Phytophthora spp.* infected soils from infested to uninfested areas.
- Moist soil and plant material will stick to vehicles, equipment and footwear and may transport *Phytophthora spp.* from infested to uninfested areas. Vehicles and equipment may be brought into often remote vegetated areas allowing for *Phytophthora spp.* to be spread to new locations. Clearance of vegetation for fire breaks and back burning activities can also move soil and infected vegetation into uninfested areas.
- *Phytophthora spp.* can survive in water bodies such as streams and dams. Water containing *Phytophthora* used to control fires has the potential to introduce *Phytophthora* to new areas unless treated with a fungicide.

Hygiene and control practices for the management of *Phytophthora* during fire management activities are the key to reducing its spread.

3. The *Phytophthora* Fire Response Team

The *Phytophthora* Fire Response Team plays a key role in reducing the risk of spreading *Phytophthora spp* on Kangaroo Island.

The role of the DEH Liaison Officer, or in the early stages of a fire the Regional Duty Officer is to determine if the washdown station is required for campaign fires. If the determination is that the washdown station must be set up the *Phytophthora* Fire Response Team will be activated (see section 4)

The *Phytophthora* Fire Response Team will need to consist of six trained staff. This is the minimum number required to enable two shifts with two staff members per shift to work throughout the fire period. The set up of the *Phytophthora* washdown station will require two staff members and should occur as part of the initial response.

4. Incident Response Plan

Upon request from the Regional Duty Officer, the Bush Management Adviser will notify the *Phytophthora* Fire Response Team which will implement the following plan:

1. Portable washdown unit to be picked up from Kangaroo Island Council or location where being used for road works (Refer to page 3 for KI Council contact details) (set up team),
2. Mobile ramps, bolts and trailer to be picked up from Kelly Hill Caves Fire Shed (set up team),
3. Fungicide (Coolacide, Phytoclean) to be picked up from Flinders Chase NP (set up team),
4. Contact CFS State Headquarters (See Section 14)
5. Units to be transported to Staging area immediately (set up team),
6. Dauncey Street Office Administration Staff to contact remainder of *Phytophthora* Fire Response Team to arrange roster,
7. Copy of *Phytophthora* Fire Response Team roster to be forwarded to CFS Base, Roger Collins, and Washdown Station Set Up Team.

5. Hygiene Equipment List

The *Phytophthora* Fire Response Team will require immediate access to the following equipment:

1. BMA Vehicle
2. Portable Washdown Unit (Kangaroo Island Council Depot),
3. Mobile ramps, bolts and trailer and 2 shifters (Kelly Hill Caves Fire Shed)
4. Fungicide (Coolacide) (Flinders Chase National Park),
5. Two large tubs for washing boots and a brush with scraper,
6. Measuring jug,
7. Shovel and scraper, and *Phytophthora* information brochures.
8. Personal Safety Equipment - overalls, gloves, goggles, safe foot wear and respirator.
9. *Phytophthora spp.* information brochures.
10. Material Safety Data Sheets.

Hygiene equipment other than portable washdown unit and ramps is stored either in the Bush Management Adviser office or vehicle, Dauncey Street, Kingscote.

6. Setting up the *Phytophthora* Washdown Station

The location of the *Phytophthora* washdown station will need to be determined for each individual fire. Generally the washdown station would be located at the primary Staging Area as vehicles and personnel are generally changed over in this area. Location will be determined by the Incident Control Team (Regional Duty Officer in conjunction with KI CFS Group Officer) and if appointed, will come under the control of the Staging Area Manager.

For some fires however, vehicles may need to be restricted to individual sectors of the fire and be required to washdown before moving between sectors. Movement between sectors may however be unavoidable due to safety or the need to respond to quickly changing fire conditions.

General washdown principles that must be followed include:

- Do not allow mud and wash-down effluent to drain into bushland,
- Do not drive through wash down effluent,
- Dig a trench to contain any run-off water if necessary.

Select a hard, well-drained site (such as a unsealed road), preferably away from native vegetation and just inside the infestation, so that *Phytophthora* is not introduced in the uninfested area.

7. Washdown Ramp Assembly

Site

- Flat ground will make setting up the ramp considerably easier
- Ensure adequate on and off ramp access for vehicles up to 10 ton in weight (e.g. 3/4 Unit)

Equipment

- Trailer with ramps from Kelly Hill Caves
- Metal tool box containing bolts and shifting spanners
- Plastic storage case.

Assembly

- Be sure to use gloves provided when handling metal ramp sections
- Place **SILVER** metal spacers on the ground to guide placement of ramp sections (spacers can stay on ramp during use),
- There are two distinct sides to the ramp, one side is marked with **YELLOW**, the other with **WHITE**,
- There are **NUMBERS** welded onto each section of the ramp, these numbers guide which sections connect (1-2, 2-3, 3-4 etc),
- Ensure all the bolts provided are fitted to the ramp and firmly tightened using shifting spanners, bolts do not have to be over tight.

8. Washdown Unit Operation

1. Park washdown unit next to ramps (if detached from vehicle, ensure trailer is firmly chocked).
2. Check Fuel (Diesel) level in engine
3. Check water level in tank (top up if required)
4. Add Fungicide (Coolacide, Phytoclean) as required
5. Set throttle to half (Adjust as necessary)
6. Press down compression release lever (on top of engine)
7. Start engine using electric ignition (If battery flat, then)
8. Use pull start to start engine (ask for assistance if unable to use this function)

9. Washdown Unit Trouble Shooting

If lose water pressure:

- Check water level in tank
- Clean inline filter
 - Use ring spanner in metal toolbox to remove filter
 - Clean filter and replace
 - Tighten firmly but not over tight

10. Chemical Handling and Mixing Rates

Fungicides such as Coolacide and Phytoclean are preferred above sodium hypochlorite as they are more effective disinfectants, biodegradable and non-corrosive.

When decanting the concentrate, be sure to use the following protective equipment:

- Gloves - Rubber or Neoprene
- Respirator
- Goggles
- Overalls
- Safe Footwear

Disinfectant Mixing Rates

- **Coolacide** ®.
 - 0.2 ml Coolacide to 1 Litre Water
 - 200 ml Coolacide to 1000 Litres Water (Washdown Unit Tank).
- **Phytoclean** ®.
 - Add 1 part of Phytoclean® to 50 parts of water.
- **Sodium hypochlorite** (pool chlorine).
 - Add 1 part of pool chlorine to 1500 parts of water (12.5%).

11. First Aid for Coolacide:

- **Swallowed (Nausea and general stomach upset):** Give large amounts of water but do not induce vomiting. Seek medical assistance
- **Eyes (Irritation and corneal inflammation - redness and itching):** Hold eye(s) open and flush with copious amounts of water for 15 min. Seek medical attention if irritation persists.
- **Skin (Irritation and redness may occur):** Wash affected area with soap and water. Apply an emollient cream if irritation develops.
- **Inhaled (Irritation seen as coughing):** Remove victim to fresh air and treat symptomatically. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.
- For additional information refer to the Material Safety Data Sheet (MSDS).

12. Vehicle Washdown Procedures

Staging Area Manager to direct all fire vehicles to be washed down before entering and leaving the fire ground regardless of whether they look clean or not.

All fire vehicles are also to report to the *Phytophthora spp.* washdown station to be disinfected after leaving the fire ground and/or before returning to base.

All vehicles are to be detailed using a high-pressure unit or a fire appliance (14 Unit) containing a fungicide solution (i.e. Coolacide, Phytoclean) including:

- Wheels (both sides)
- Wheel Arches
- Mud Guards
- Running Boards and Steps
- Sump Guards
- Decks / trays
- Cabin Floor (if time permits)
- Fire Hoes, Shovels, Other Tools
- Hoses, Housing for Hoses etc
- Windscreen (if time permits)

Visual inspections should confirm that vehicles, plant, equipment and footwear, are free of clods of soil, slurry (water and soil mixture) and plant material. **Dust and grime need not be removed.**

It is essential that all heavy machinery (graders and bull dozers) be thoroughly cleaned before entering and leaving the fire ground. This may be undertaken on site or at the staging area. The location of washdown should be determined to ensure minimum soil movement.

When using high pressure units to washdown vehicles, avoid contact of high pressure spray with eyes and be sure to use the following protective equipment:

- Overalls
- Safe Footwear
- Goggles
- Gloves
- Respirator is provided, but not required as per MSDS

Implement the “*Phytophthora* hygiene log” system for all vehicles (fire units and private).

13. Personnel Washdown Procedures

All personnel are to have their boots cleaned:

- upon entering the staging area from the fire ground; and
- before entering a bus on the fire ground if being shuttled by bus to the staging area (this includes hot changeovers);

Personnel are to:

- Remove clods of soil with a hard brush or tool.
- Walk through a footbath:
- If boots are very muddy, the high pressure spray unit may be used to wash down boots.

Footbath Mixing Rates:

- Disinfectant mixing rates are the same as for vehicle washdowns.

Note: If footbaths are not available, footwear, small equipment and tools may be disinfected using a hygiene kit.

Note: Water and chemical mix in footbaths should be changed at the start of every shift or when solution becomes excessively contaminated with mud and other organic material.

14. Radio Procedures

General Fires

Contact Regional Duty Officer

Campaign Fires

When responding to a fire, regardless of the stage that the fire is at, you must contact State Headquarters and inform them of your movements, this ensures members of the Pc Fire Response Team are logged.

- Switch to **GRN Talkgroup 124**
- “CFS State Headquarters, this is **Pc Washdown Unit** responding to the (Destination) **Fire.**”
- Stay on Talkgroup 124 until instructed by CFS State Headquarters to switch to the designated fire Talkgroup.

State Headquarters will provide directions of where to proceed to (e.g. Staging Area) and who to contact upon arrival (e.g. Staging Area Manager). Once at the Staging Area, all GRN communications are to be through the Staging Area Manager. Alternatively you may be instructed to contact the Sector Commander on a **GRN Talkgroup**. You may also be required to contact CFS Vehicles using VHF when on the fire ground or UHF Radios to contact private landholder vehicles.

GRN (Government Radio Network)

- Network used for majority of communications
- Channel 124 - CFS State Headquarters
- Channel 161 - Primary Kangaroo Island Talkgroup
- Channel 162 - Secondary Kangaroo Island Talkgroup
- Channel # - Sector Commander

UHF

- Channel #
- Used by CFS to contact landholders operating private vehicles.

VHF

- Channel #
- Used by CFS to talk between CFS Vehicles on fire ground.

15. *Phytophthora Fire Response Team Shifts*

For short-term fires (two shifts or less)

A 14 unit is appropriate for effecting washdowns, unless washdown trailer has been requested by Regional Duty Officer, ramps not required.

For campaign fires (greater than two shift)

A washdown station is to be set up.

16. *Dismantling*

When informed by the Regional Duty Officer that all vehicles and equipment have left the fire ground:

- Washdown Bush Management Adviser Vehicle
- Washdown ramps, dismantle and stack on trailer
- Washdown Hygiene equipment (tubs, brush's etc)
- Washdown Phytophthora Washdown Unit
- Return ramps to Kelly Hill Caves Fire Shed
- Return Phytophthora Washdown Unit to Council Depot
- **Any breakages must be reported to the Bush Management Adviser**

17. *Phytophthora* Fire Response Team Contacts and Roster

Name	Work Phone	Home Phone	Mobile

Name	Set Up	Shift 1	Shift 2	Shift 3	Shift 4
	X	X			
	X	X			



For further information contact:
The Bush Management Adviser
Department for Environment and Heritage
PO Box 39
Kingscote, SA, 5223
Phone: (08) 8553 2381